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The State of Montana

Compensation Issues And Recommendations

A Study
of the Current
Compensation System
June 1990

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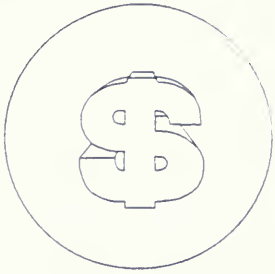
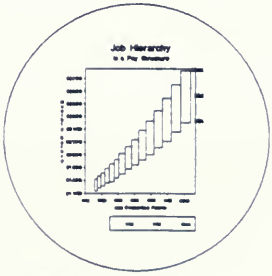
Equity Issues
In an Effective Compensation Plan

Individual Equity



External Equity

State Employees



Internal Equity

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Section 5

Individual Equity

Individual equity is the fairness criterion that demands that the State reward individual employees based on their contributions to the attainment of the State's goals and objectives.

KEY CONCERNS

- Employees are poorly motivated by a lack of direction in the system.
- Sufficient range from the minimum to the maximum of pay does not exist to fully award adequate pay increases.
- Movement within pay ranges are only determined by length of service.
- An adequate performance management system does not exist.
- Documentation of the performance appraisal process and results is weakened by inconsistent application.

RECOMMENDATIONS

- Establish sufficient range spread for each pay grade to fairly reward a range of performance.
- Adopt policies in Phase 1 - Development that reward within-range increases on the basis of merit or a combination of merit/length of service.
- Use management and employee input to develop and install a new job-related performance appraisal system.
- Install a performance appraisal training program.
- Validate the performance appraisal process by utilizing a computer-assisted program designed to monitor and manage the system.

Section 6

Strategic Planning

Building equity into the Statewide Pay Plan is a matter of judgment founded by organizational philosophy and compensation strategies.

KEY CONCERNS

- The State has not utilized sound market strategies to provide guidance in attracting, retaining, and motivating employees.
- Current compensation strategies have been intermingled with bureaucratic needs resulting in a system that has punished the people they were designed to serve.
- Attempts to make needed improvements in the current compensation system have been stymied by a lack of support.

RECOMMENDATIONS

- Define a market strategy centering around a five year phase-in plan. Initially adopt a 10% lag policy.
- Adopt a unity of purpose between all concerned factions through a participative approach between management, unions, and employees.

- Design two pay structures using an exempt and nonexempt job evaluation system. Balance internal, external, and individual equity concerns in the basic design of the two structures.

- Implement a one-year phase-in period to design and implement the new compensation systems.

2

Background

The State of Montana has requested that The Waters Consulting Group, Inc., conduct a compensation audit and pay study of the State's compensation system. This Report identifies and defines key issues and recommendations associated with the State's current compensation system to be targeted for further investigation by the Committee on State Employee Compensation.

The Waters Consulting Group, Inc. (WCG) specializes in human resource management services providing consulting expertise to a wide range of clients. We have worked extensively with governmental entities nationwide including states, cities and special districts. We have also served numerous private sector clients, including several Fortune 500 companies. Our experienced staff consists of human resource professionals are dedicated to using quality techniques and skills that produce programs that align compensation with desired performance in an environment of ever-increasing change, diversity, competitiveness, and regulation.

The State of Montana is facing numerous human resource challenges in the 1990s. Perceived inequities in the State's compensation system has created concerns and frustration for many State managers, employees, and employee organizations.

House Bill No. 786 provided for the appointment of the Committee on State Employee Compensation with a mandate to examine policies governing state employee compensation in Montana as well as study compensation policies of other comparable governmental and private sector entities. In addition, the Committee is responsible for reviewing the professional literature and research on compensation issues. The Committee was also responsible for analyzing and assessing various components of the Montana state employee compensation system. Further, the Committee has been delegated to develop recommendations to maximize employee productivity and promote quality governmental services within available funding. The Committee is responsible for reporting its findings, recommendations and any proposed legislation to the Governor and 52nd Legislature.

Management and employees from the various Agencies within the State have volunteered their time and efforts to provide the Committee with verbal and written comments that voice their concerns about the vital equity issues surrounding State employee pay and benefits.

In conducting the diagnostic audit of the current compensation system for the State, WCG has developed an understanding of the interworkings between the Department of Administration, the Agencies, the Legislature, the union representatives, and the employees. We have developed an enhanced perspective of the polymorphic nature of the State's diverse needs.

Our approach to the challenge of studying these issues in the State of Montana has emphasized blending input from the Committee, staff, employees, union representatives, and other key personnel with sound

compensation principles. Our firm has gathered background information on existing compensation and benefits that includes, but is not limited to the following: existing classification specifications and position descriptions, job evaluation documentation, salary survey information, salary structure statistics, benefits programs and costs, performance appraisal documentation, administrative guidelines, employee payroll information, and written and verbal comments to the Committee from concerned employees and union representatives.

In addition to analyzing current and historical documentation and interviewing employee groups and other selected individuals, WCG has provided the State with a key managerial tool that has been continually utilized in our pay study. We have installed on PC computers within the Department of Administration the Compensation Administration System Software (C.A.S.S.). This proprietary software has been developed by The Waters Consulting Group to assist the user in combining their compensation goals with computerized technology to design and maintain a pay system customized to their unique business environment.

C.A.S.S. consists of programs and data files which allow the effective management of wage and salary data. Current salary data for all employees paid by the Department of Administration and for all classified employees paid by the six universities has been downloaded from the respective main frame computers to C.A.S.S. In addition, all salary survey statistics submitted from all participants in the State's 1990 Salary Survey have been entered in C.A.S.S. Utilization of the software has enabled our firm to provide the State with timely and accurate statistics and budgetary projections that will be highlighted throughout this Report.

The State of Montana has its own unique work environment, its legacy from the past that dictates to a degree how its employees respond to problems and opportunities. Our study has focused on identifying a set of strategically related "cultural" behaviors and practices unique to Montana State Government that reflect its values to the citizens across the State.

Three key elements have been addressed that dictate the State's work environment: (1) the prevailing performance standards that establish the guidelines for providing quality public service; (2) the economic concepts that define how the State can operate; and (3) the human resource concepts and values that prevail and define what it's like to work for the State of Montana. Our efforts in this pay study have been guided by focusing of these key elements.

Identifying and defining key issues associated with the State's current compensation system encompasses the need to address the central notion of equity. The critical theme that exists at the center of all compensation theory and practice is a triad: internal equity, external equity, and individual equity.

Different behavioral patterns are discerned if the correct balance between internal, external, and individual issues is not achieved in the implementation of a pay program. As evidenced in the committee hearings, compensation is an important concern for most employees. Many have reviewed their rewards with others in and out of the organization. If an employee's job is priced competitively with the market, he or she may be dissatisfied because their job is not priced fairly in

relation to its internal worth to the State. Employees, sometimes more than managers, recognize productivity and the lack of it among their peers. Perceived or actual inequity affects motivation and therefore influences an employee's behavior, performance, job satisfaction, and productivity.

This Report has been written to both educate and inform. Our attempt here is to educate the reader to Generally Accepted Compensation Practices. In addition, we have attempted to compare the current approaches to pay in Montana State Government with these acceptable methods for monitoring, attracting, and retaining employees.

Internal equity can be defined as the process of setting wage rates within the different pay plans that conform to the job's internal worth to the State of Montana. Job analysis and job evaluation are the management tools that significantly define and establish internal equity within an organization.

The State of Montana has a long history of struggling with the concept of internal equity. The Blue Collar Plan, the Teachers' Pay Plan, the Liquor Store Pay Plan, and the Physicians' Pay Plan have been separated from the Statewide Plan. Separate job evaluation systems have been designed for each of these plans in an effort to establish equity. Despite attempts to change the job evaluation system in the Statewide Pay Plan, lack of support from all involved parties has resulted in failure to make needed improvements. The majority of employees classified within the Plan have remained in the same job hierarchy that was established in 1976 when the Plan was initially created. A key objective of our pay study has been to determine if the mandates of establishing internal equity have been sacrificed by the historical inability to establish a new job evaluation system due to political, labor, and administrative constraints.

Job Analysis

Job analysis involves the identification and the documentation of the job. It is defined by the Department of Administration as "the systematic process of collecting and making certain judgments about all the important information relating to the nature of a specific job or position."[1]

The activities involved in collecting, reviewing, analyzing, and recording job data represent a highly labor-intensive effort involving all employees. It is often the most undervalued and poorly implemented management process. Any problems in the collection and documentation of this vital information weakens the foundation of the entire pay system.

Job Documentation Methodology in the State of Montana

The State of Montana has implemented a job analysis program encompassing all Agencies. Approximately 12,600 position descriptions and 1,310 class specifications have been prepared for the statewide classification plan.[2]

The State has followed Generally Accepted Compensation Practices (GACP) in the design of the job analysis process. Over a period of time, the staff has adhered to variations of the following methods for collecting, analyzing, and documenting job activity: (1) interviews with employees or groups of employees performing the job or with the manager supervising them; (2) direct observation of the work

being performed; (3) completion of questionnaires by employees performing the jobs or by the managers supervising them; and (4) completion of checklists.

In considering the advantages and disadvantages of various job collection methods, it has been our experience that a well designed job description questionnaire followed by a job audit, as needed, is the most cost effective method of collecting data in a short period of time. Given the variety of job collection methods, the State has chosen to focus their efforts on the questionnaire and the audit approach.

The format of the Position Description Questionnaire utilized by the State of Montana reflects the requirements surrounding legal considerations and the intended usage of the information. The following major job elements are among the items that have been included on the Position Description Questionnaire:

- Job summary
- Principal duties and responsibilities
- Education, experience, and certification requirements
- Work objectives and purpose
- Equipment or machinery used
- Working conditions
- Contacts within the Agency, outside the Agency, and with the general public
- Levels of authority and responsibility
- Exercise of discretion and judgment
- Supervision of other positions
- Management of work processes and programs
- Types and levels of skills, knowledge, and abilities required for satisfactory performance
- Typical types and minimum levels of training and/or experience required for acceptable performance upon appointment

WCG recommends the questionnaire be adapted to conform to the job evaluation system described later in this Section of the Report. This would serve to simplify the evaluation process when implemented.

The stated goals regarding the use of the position description within the State of Montana is documented in the training materials prepared by the Department of Administration as follows:

> "is an essential building block for carrying out personnel management responsibilities: obtaining, maintaining, and retaining staff. This means that the functions of...
>
> - workforce planning
> - recruitment
> - selection
> - pay determination
> - promotion
> - training
> - performance appraisal
> - organizational development
>
> cannot be adequately performed until duties and responsibilities are identified and described."[3]

The State of Montana follows GACP in using job audits to clarify or supplement data from the position descriptions. These audits are conducted by personnel specialists through interviews with employees or supervisors or through direct observation of work conducted at the work site. The interview is a one-on-one situation and facilitates the audit process.

Legal Considerations in Defining Job Content Data

A broad spectrum of federal laws has had a significant impact on the compensation practices of Montana State Government. To survive and grow in a government-regulated environment, the State must relate to employees within the limits set by government regulations, labor budgets, and employee needs. It should be noted that any discussion in this Report is not intended to provide a complete analysis of current legislation as it relates to compensation. It is understood that the Legal Department of the State of Montana is the primary resource for legal interpretations in human resource issues.

Our approach in this pay study to recommendations regarding the design and implementation of a compensation system is driven by an awareness of the legal issues regarding compensation. Passage of such legislation as the Equal Pay Act and Title VII has brought a strong and renewed interest in job analysis and the realization that it must be accurate and complete. The Fair Labor Standards Act (FLSA) requires most organizations to support their determinations of exempt and nonexempt employees through job analysis techniques. The Equal Pay Act (EPA) requires equal pay for employees performing work in similar occupations requiring equal pay for employees performing work in similar occupations requiring equal skill, equal effort, and equal responsibility under similar working conditions. Performance rating programs as well as pay systems must be based on records and procedures that define employment standards on the basis of job requirements as defined by a system of job analysis.

In legal issues, the burden of proof is on the State of Montana to show nondiscrimination in any employment decision related to discrimination. Here, the impact of the State's actions becomes even more important than the intent of such actions.

The State of Montana has the right as an employer to insist that a prospective applicant meet job qualifications. The qualifications, however, must be well defined and relate directly to success in job performance. Only bona fide occupation qualifications (BFOQs) can be used to discriminate among applicants. This holds true for promotional opportunities and reclassification, but the State must permit freedom of movement or access to higher-rated jobs to all employees.

Our discussion in this Report to the related risk of litigation from the design and implementation of the job analysis process is to emphasize the importance of maintaining current, accurate, and detailed job analysis information.

The State of Montana and Class Specifications

One of the most important outputs of the job analysis process in the State are the classification specification. Job analysis information is collected, reviewed, edited, and formatted into a classification specification. The relationship of class specifications to other job-content data is illustrated in Figure 3-1.

The Department of Administration has the responsibility of administering the process of utilizing the results of the job analysis process to group all positions into defined classes. A class within the State is defined as one job or a group of jobs that:

- Have sufficiently similar responsibilities and duties
- Have the same entrance requirements
- Receive the same amount of pay; and
- Can be referred to by the same class title although they may have different job titles.

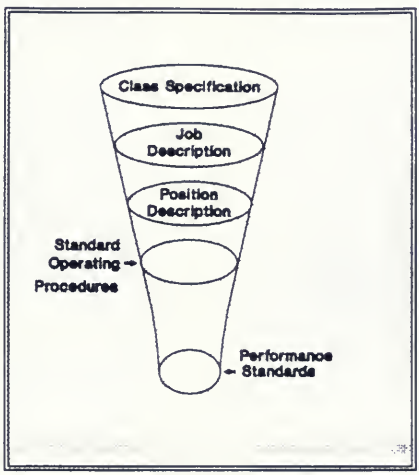


Figure 3-1

THE PROCESS OF DESCRIBING WORK REQUIREMENTS RESULTING IN AN OUTPUT MEASURED BY PERFORMANCE STANDARDS[4]

Class specifications are the written descriptions of the major activities and features of jobs included with a class. Within the State of Montana, a class specification is "a general description that defines the class in terms of kind and level of work, how the class differs from other classes, how the job evaluation factors are used, and the minimum requirements necessary to perform the work of the class."[5]

PROBLEMS WITH CURRENCY OF CLASS SPECIFICATIONS

It is vital that job documentation be prepared in a systematic manner and be consistently updated to ensure that jobs are properly grouped into classes. Compliance with this requirement demands the support of the Legislature, management, and employees.

During the course of our audit, several indicators were present that lead us to conclude that current job documentation is not up to date. However, it is beyond the scope of our pay study to conduct job audits to determine the actual percent of jobs in the State for which accurate and up-to-date documentation exists.

It is within the scope of our pay study to ascertain the existence of written policies regarding the design and implementation of the job analysis system. The Classification Manual provides adequate documentation of the classification process as well as provides the class specifications for all classes within all pay plans.

A classification inventory numeric listing is provided in the Classification Manual that lists the class title and the date of the last update of the class specification. The inventory listing includes dates ranging from 1974 to 1989. An aging of the dates of the last updates suggests that attention should be directed to verifying that the duties, responsibilities, and qualifications as defined in the class specifications provide adequate information to substantiate personnel actions.

The problems associated with inadequate job documentation that have been identified in this Report surfaced during the development phase of the Statewide Pay System in 1974. Sufficient time during this initial period was not allocated to the process of job analysis and documentation. By 1981, the problems had not been resolved. A paper submitted by the Department of Administration in 1981 stated: "As a result many specifications do not provide clear and understandable information. Additionally, the Personnel Division has been unable to devote the necessary manpower to revise and update existing specifications and write new specifications as the need arises. Although two or three staff are always working on specifications, the Personnel Division has never been able to fully recover from the mistakes and lack of time that plagued the development of the system. The result of the problem with specifications is that in some hearings, the hearings examiner must make a decision that is based on confusing or unclear information."[6]

In the Final Report to Governor Ted Schwinden and the 48th Session of the Montana State Legislature in December 1982, the issue of current job documentation was addressed: "Many class specifications (the primary document used in classifying positions) are imprecise and unclear, making both review on appeal and the proposed delegation of position classification to state agencies difficult. (A class specification rewrite project should bring all class specifications up-to-date by December of 1982.)"[7]

PROBLEMS WITH A SYSTEMATIC APPROACH

In addition to the issue of currency of documentation, it is vital that the job analysis process be maintained in a consistent, systematic manner. The Department of Administration shares its administrative job analysis responsibilities with all agencies. "Each agency should establish its own policy and procedure regarding the review and approval"[8] of the Position Description Questionnaire.

In addition, the Department of Administration shares its classification responsibilities with eight agencies. The agencies that have agreed to "remain in compliance with policies, procedures, timetables, and standards established by the Department"[9] include the following: the University of Montana, Montana State University, Montana College of Mineral Science and Technology and the Departments of Administration, State Lands, Natural Resources and Conservation, Social and Rehabilitation Services, and Revenue.

In our experience, when the assimilation of responsibilities is shared by multiple parties, the potential exists for inconsistent administration of duties and responsibilities. We recommend the State adopt a centralized approach under the authority of the Department of Administration.

RECOMMENDATIONS FOR IMPROVEMENT IN THE JOB ANALYSIS PROCESS

Our recommendations throughout this report for improvements in the internal, external, and individual elements within the State's current compensation system are founded on the building blocks inherent in accurate job content data obtained in a quality job analysis process. Implementation of our recommendations in this Report will begin with the making the following improvements:

1) Job documentation provides the foundation for the job evaluation process and should be prepared with the evaluation criteria in mind. Before the relative value of jobs in the State can be determined, the nature, purpose and organizational level of the jobs must be understood clearly.

   A key proposal addressed later in this Section will be to recommend that the State adopt a new job evaluation system(s) for the Statewide Pay Plan. We further recommend that all class specifications be reviewed and updated to substantiate all personnel issues addressed in the development of a new job evaluation system(s). This process should be under the direction of the Department of Administration.

2) Job documentation also provides accurate data for making salary comparisons in a pay survey of other organizations. A determination must be made as to whether jobs described in the survey are comparable to jobs in the participating organization. If so, it is valid to use the survey data.

   The documentation of the benchmark jobs that were transmitted with the January 1990 survey consisted of a one paragraph summary of primary duties and responsibilities of each job.

   In analyzing survey statistics gathered in the recent January 1990 salary survey, we found the practice of using short job summary paragraphs acceptable, but not preferable. For future surveys, we recommend the State send a complete, updated class specification or position description for each benchmark job included in the survey. See Section 4 for additional information regarding documentation in the survey process.

3) Job documentation also is used to provide classification control. Jobs must be grouped in a class based upon certain criteria relating to the job characteristics and the job evaluation system.

   Control has not been achieved in the classification process for Montana state employees. Lack of control is directly proportional to the variations in the quality of the job documentation that has been addressed in this Section of the Report.

4) Job documentation with clear definitions of job content provides effective communication vehicles between management and employees. An employee must know and understand the duties and responsibilities of the job if he/she is expected to satisfy performance goals or standards for that job.

   The issues relating to performance appraisal are addressed in Section 5. A quality

system of performance management is founded in accurate and current job documentation. The following quote from the "Supervisor's Guide to Montana Performance Appraisal System" expresses this belief: "To ensure that an employee will do the job well, it is important that the duties and responsibilities are clearly understood. It is very important therefore, especially for new employees or employees with new duties or responsibilities, to review and discuss the class specification, position description, and other materials that describe the job and its responsibilities."[10]

5) The State has exposure to difficulty in supplying third parties with a complete explanation of the organization's human resource decisions. The existence of accurate, current, job-content-based documentation greatly will enhance the State's ability to defend unwarranted charges of discrimination. Recent court cases have demonstrated the need for quality job documentation by using this information to determine the legality of personnel programs and practices.

Job Evaluation

To enhance productivity and a sense of fairness, employees must understand that:

.....Jobs* of comparable worth are compensated accordingly.

.....Jobs that are worth more are compensated more.

To ensure that the pay opportunities for comparable positions are internally equitable, the value of each job relative to all other jobs in the organization must be determined. This method of determining the relative worth of jobs is called job evaluation.

Job evaluation, however, is not to be espoused as the sole answer that provides unquestionable internal equity results. Evaluation procedures merely provide a **means for structuring judgments** regarding the internal equity of pay relationships. At best, job evaluation remains an administrative tool for ensuring objectivity and consistency in an organization's thinking and rationale regarding job worth. If poorly constructed, job evaluation has the potential to contribute to inequities through an ineffectual choice of job evaluation procedures and practices.

* Jobs, in this sense, refers to the work to be done, not to the person doing the work.

Compensable Factors

A decision must be made on the concept of value, or compensable factors that make one job worth more than another to the State. While a great deal of time and quality effort has been expended to select new compensable factors, there currently remains the five identical broad, general factors adopted in 1977 that serve to establish the pay relationships in the Statewide Pay Plan. The compensable factors are: (1) nature of work; (2) supervision received; (3) management and supervision of others; (4) personal contacts; and (5) scope and effect of actions and decisions. Additional information regarding the compensable factors utilized in the Statewide Pay Plan may be found later in this Section.

Confidential Data
Contact
Responsibility
Decision Making and Authority
Supervision
Working Conditions
Experience
Education
Knowledge
Guidance Received
Accuracy
Organizational Control
Complexity
Errors
Mental/Visual Demand
Timeliness
Degree of Independence
Human Relations
Initiative and Ingenuity
Physical Effort
Hazards
Responsibility for Equipment

Figure 3-2

EXAMPLES OF COMPENSABLE FACTORS FOR DIFFERENT JOB CLASSIFICATIONS

In order to qualify as a compensable factor, GACP states an item must be found in all jobs included in the pay plan but in different amounts. Using the yardstick analogy, if an object were to be place next to a yardstick and it registered no measurement because the yardstick was not sensitive enough to the dimensions, the yardstick could not qualify as a measuring instrument, and another would need to be found. So, too, a job compared to a compensable factor that fails to register a reading suggests that the factor being considered is not truly a compensable factor. The yardstick used to establish the value of a job must measure the basic reason for setting a range of salary for the position.

In choosing compensable factors, the decision can be made to include all jobs under "one big tent" and select compensable factors that apply to all jobs, or to select clusters of jobs and select factors that apply to each separate cluster. For example, maybe the compensable factors that are important in compensating teachers are indeed different than those used in paying blue-collar employees. In large organizations there are likely to be different compensable factors applicable to managerial, administrative, professional, and craft jobs.

When comparing job evaluation systems within the State of Montana, we found multiple "yardsticks" being used to establish the value of jobs throughout the State. While the majority of employees have been grouped together under the Statewide Pay Plan, additional plans have been developed

that utilize different compensable factors.

For example, the Blue Collar Plan utilizes the following eleven compensable factors:

SKILL
(1) Education and trade knowledge;
(2) Experience;
(3) Initiative and ingenuity;

EFFORT
(4) Physical demands;
(5) Mental or visual demands;

RESPONSIBILITY
(6) Responsibility for equipment or process;
(7) Responsibility for material or product;
(8) Responsibility for safety of others;
(9) Responsibility for work of others;

JOB CONDITIONS
(10) Working conditions; and
(11) Hazards.

The Blue Collar Plan has been designed around the four universal factors endorsed by the Equal Pay Act (EPA) of 1963: skill, effort, responsibility, and working conditions.

Education and experience are the two compensable factors used by the Teachers' Pay Plan. By choosing only two factors, the State is endorsing the theory that the only measurable difference between jobs that are included in the Teachers' Plan can be detected by considering education and experience. The State has adopted the policy that items such as those listed in Figure 3-2 do not appear in sufficient quantity to produce a measurable difference in the jobs that are included in the Teachers' Pay Plan.

Responsibility and results are used to identify the compensable factors in the Liquor Store Plan. Placement on the Plan is determined by an employee's position (i.e., manager, assistant manager, clerk) and on the store's sales volume.

Job Evaluation Approaches to Establishing the Relative Value of Jobs

Two basic approaches have evolved within organizations to measure internal job-related differences: (1) market-data oriented, and (2) job-content oriented.

The market-data oriented approach is espoused by those organizations that wish to totally emulate the market in the job hierarchy created within their organization. In these circumstances, the organization generally designs its pay structure first around the market data with little emphasis given to internal considerations.

The job-content oriented approach looks at internal relationships when measuring job-related differences as well as market data. The State of Montana has experimented with several job-content approaches to establishing the relative worth of jobs.

When the Statewide Pay Plan was adopted in 1975, all employees of the State were either classified in the Statewide Pay Plan or were considered exempt from the Plan. The State had adopted the policy of including all employees under or Plan and adapting one job evaluation system around a large, diverse group of employees. Problems within the Plan resulted in several groups pulling away from the Plan and

creating separate job evaluation systems for each plan. (See Figure 3-3.)

Reoccurring problems have continued to straddle the job evaluation system for the Statewide Plan. These problems exist because the job evaluation system does not meet the needs of Montana state employees.

- **Statewide Pay Plan**
  Factor-Guided Classification/Ranking
- **Blue Collar Plan**
  Point Factor Method
- **State Liquor Plan**
  Ranking Method
- **Teachers Plan**
  Ranking Method
- **Physicians Plan**
  Ranking Method
- **Exempt Positions**
  Market Pricing
  Ranking

Figure 3-3

JOB EVALUATION IN MONTANA STATE GOVERNMENT

Figure 3-3 illustrates the variety of job evaluation systems currently in use in the Montana State Government. The key focus of our pay study is on the job evaluation system utilized in the Statewide Pay Plan, as evidenced in the following pages. The following overview of our observations during the pay study is provided for your consideration.

Ranking is the oldest method of job evaluation. If the group of jobs are small enough, it is possible to obtain quite acceptable results by using the ranking method. If there are a large number of jobs to rank, ranking becomes very difficult.

The State has chosen to functionally rank certain small groups of employees as illustrated in Figure 3-3. In choosing this non-quantitative approach to job evaluation, the State has established a basis for judging internal equity by ranking the whole job based on certain chosen compensable factors. Jobs are compared to other jobs within the group to arrive at a hierarchy of positions built on the overall aspects of the job.

Advantages of the Ranking Methods used in the State of Montana include the following:

- **Simplicity**
- **Inexpensive to develop**
- **Quick implementation**
- **Little training requirement for system implementation**

Disadvantages of the Ranking Methods for the State of Montana include the following:

- **No Detail/Documentation**
- **Objectivity**
  Incumbent's Performance rather than job content may unduly influence job evaluation process.
- **Flexibility**
  Ranking is not easily adaptable to changes in conditions in the State such as growth and reorganization of positions and job duties. It does not readily identify changes in job content, which could lead to internal equity inconsistencies.

The Blue Collar Plan is a well-designed job evaluation system that utilizes a quantitative point factor

approach to establishing internal equity. The eleven compensable factors listed on Page 3-8 are weighted, and a scale of point values have been assigned to each to reflect this weighting. Each job is compared to descriptions of the various levels or degrees within each factor. When the appropriate degree is selected for each factor, the assigned points are combined to produce a total score for each job.

Our recommendations for the development of a new job evaluation system(s) or the Statewide Plan focus on the development of a quantitative point factor system. In our experience, this approach best satisfies the criteria for establishing internal equity in a pay system. However, different compensable factors and weights will need to be considered.

Advantages of the point factor method used in the State of Montana include the following:

- **Objectivity**
  Properly designed, a key advantage is its characteristic of objectivity.
- **Understandability**
  Given the reality that all employees may or may not agree with the Point Factor System, it is generally easily understood by all employees. Acceptance and trust in the system begins with an adequate understanding.
- **Stability**
  Stability in a Point System is achieved by the weighting of the compensable factors and the points assigned. This stability also affords flexibility, since the Point System relates the jobs to a common standard, whereas the previously discussed Ranking System relates job to job.
- **Flexibility**
  New jobs are readily integrated into the system. This is an advantage over the Ranking System which can be upset by the introduction of new or changed jobs to the hierarchy. Again, it is the stable standards, the compensable factors, which provide that ready assimilation.

Disadvantages of the Point Factor Method for the State of Montana include the following:

- **Professional expertise in plan design**
  The largest disadvantage occurs during the development phase in creating equitable compensable factors, levels, and weights. The factors have several characteristics or tests they must meet in order to qualify as compensable factors. After identifying the factors, they must be defined, described, and weighted. This is a process that requires the technical expertise of proven experts.
- **Potential for ineffective documentation**
  In the quest for greater accuracy and refinement, the Point System designers may have a tendency to "overkill" the problem. Designers may want to clarify the meaning of compensable factors just a little more to accommodate just one more possibility, and consequently may wind up producing complex plans that only they can understand. Simplicity, again, is the keynote of success in designing a plan.

Job Evaluation in the Statewide Pay Plan

The greatest single problem to be identified in our study of internal equity issues in Montana State Government is the job evaluation system for the Statewide Pay Plan. The job evaluation process should assume a significant role in assuring that the Statewide Pay Plan recognizes each job on its own merits as it currently exists.

This observation is not a new issue with those familiar with the history of the Statewide Plan. A historical perspective of the initial development of the plan and the subsequent attempts to change the plan is needed to understand and evaluate our recommendations for the development of a new job evaluation system(s) for the Statewide Plan.

The job evaluation system in use today was developed in 1977, shortly after the quantitative, point factor system developed in the previous year was abandoned. The eight compensable factors were re-written into five broad and general factors. A non-quantitative system was adopted. **The wage relationships developed in the point factor system, however, remained intact and serve as the foundation for the job hierarchy in existence today.**

"The five factors, which are nature of work, supervision exercised, supervision received, public contact, and scope and effect of actions and decisions, serve as a basis for comparing jobs to each other. Positions or classes are compared to each other and a series of qualitative judgments are made as to the relative strengths and weaknesses of a position or class in each of the five factors. The cumulative judgments are expressed in a grade or skill level. This method is relied upon to make classification decisions that come about with the addition of new positions and changes in the duties and responsibilities of existing positions. In addition, this method is also used to defend decisions in the appeals process, many of which were classification decisions based on the Classification Grading Schedule."[11]

Background of the Development of the Current Job Evaluation Plan

In 1973 the Classification and Pay Act directed the Department of Administration to design, implement, and maintain a classification system and to submit a pay plan to the 1975 legislative assembly. Previous attempts to maintain a pay plan were fragmented into individual pay being determined differently at each agency level. The purpose of the new classification system was to provide a statewide uniform pay policy.

The Classification and Pay Act established the guidelines currently in place for grouping positions into defined classes based on "similarity of duties performed, responsibilities assumed, and complexity of work."[12] The Plan was approved April 1975.

The approach used in the initial development of the Plan was a quantitative point factor system called the Classification Grading Schedule. Eight compensable factors that produced measurable differences in job rates were applied to all employees within the State with the exemption of those positions exempted from the Plan. The eight compensable factors were: (1) education; (2) experience; (3) physical demands; (4) working conditions; (5) supervision received; (6) supervision

exercised; (7) authority exercised; and (8) responsibility.

After using the point factor job evaluation system for a short period of time, inadequacies regarding the design of the system culminated in 1976 in the discontinuance of its use. Reasons for its failure include:

- **Plan design**
  The intent surrounding the original design of the job evaluation system was to use a ranking system. A quote from a paper submitted by the Department of Administration stated: "In defense of the designers of the grading schedule, it must be said that it was never intended to be the primary classification tool. It was originally intended to be used 'in-house' as a guide to help in the ranking process. However, department managers decided that it looked 'scientific' and would be useful in explaining to employees how their job was classified. As soon as it was made public in late 1974, it was only a matter of a few days before the Personnel Division was flooded with employees' own versions of how their job should have been factored."[13]

  The design of a job evaluation system requires technical expertise of individuals who are knowledgeable of GACP. The State's Plan was doomed for failure when the intent was to utilize a ranking system but the practice evolved into the utilization of a point factor system.

- **Inadequate documentation**
  A point factor system is designed to evaluate each job based on comparisons with a set of compensable factors. The factors in the Plan were not defined adequately to serve as a guideline for making consistent applications of the intent of the system. Ambiguity in the documentation of the Plan provided a gap that was filled with indecision and inconsistent application.

- **Lack of organizational control**
  The system was understandable to the extent that employees and supervisors could manipulate the job documentation to support inflated job characteristics. Controls were not in place within the Department of Administration to prohibit such abuse of the system.

  A paper submitted by a staff member in the Department of Administration testified that, "Employees and supervisors quickly discovered that in order to have a position upgraded, all one had to do was increase the education and/or experience necessary to do a job. Although the classification analysts attempted to compensate for inflated qualifications, there was no sound and effective way to challenge what the supervisor felt were necessary qualifications. The classification analysts were never thoroughly trained in how to analyze duties and responsibilities to determine valid minimum qualifications. "[14]

- **Lack of proper training**

  Regardless of the job evaluation system chosen, training individuals who will be involved in the job evaluation process on all system mechanics and controls is critical to the success of the system. Abuse of the system will generally occur if guidelines are not initially in place for the final decision-making process for classification requests,

reclassification requests, and system maintenance.

The administration of the system was described as follows: "Although they worked closely together in factoring jobs, all was lost when one quit and a new classifier was hired. Use of the grading schedule was soon based on oral tradition instead of written instructions and formal training."[15]

The job evaluation system currently in use in the Statewide Pay Plan has developed through the years to become a qualitative, factor-guided classification/ranking system wherein rewards reflect job and hierarchical levels established in the late 1970s with the initial point factor system. The jobs have been slotted in the structure through one means or another using the five compensable factors as a guideline.

Anchors have developed over the years at various points in the classification hierarchy as illustrated in Figure 3-4.

The inclination in such a system is to obtain the job facts on a new job and simply refer to the existing structure in attempting to evaluate the subject job. An evaluation can be made by determining where it might best fit in the structure relative to all the existing jobs. Operating in this environment can potentially lead to lethargy and insensitivity to pay equity. In addition, these can develop a resistance to making changes to pay structures that have remained intact and unchallenged.

TYPE OF CLASS	GRADE RANGE
Administrators/officials	16-22
Professionals	12-16
Technicians	9-13
Paraprofessionals	8-11
Office/clerical	5-11
Skilled craft	10-12
Service/Maintenance	5-12

Figure 3-4

GRADE RANGES ASSIGNED TO CERTAIN TYPES OF CLASSES

Commitment to Change the Current Job Evaluation Plan, 1982

An audit similar to the current pay study was undertaken in 1982. In the Final Report to Governor Ted Schwinden and the 48th Session of the Montana State Legislature recommendations were made for improvement in the compensation system that encompassed the areas of collective bargaining, position classification, employee pay, and personnel administration. The job evaluation methodology and practice was examined to determine if success had been achieved in two main areas: (1) grouping positions into classes; and (2) establishing an equitable job hierarchy.

The impetus to examine the system stemmed from continued dissatisfaction from management and employees surrounding the current job evaluation system. The following summarizes the complaints as listed in the Final Report to the Governor:

- **Communication**
  The final decision made in the qualitative job evaluation method is communicated through the final placement in the job hierarchy. Written documentation does not exist that would communicate the series of judgments that produced the final results. While the compensable factors are well known, the degree to which each job possesses each factors is not documented.

  The resulting image attached to the qualitative method is that "the process appears subjective, lacks confidence and is more difficult to review than quantitative methodologies."

- **Inadequate job analysis documentation**
  Many class specifications were found to be out-of-date and did not adequately specify the duties and responsibilities of the position(s) within the class.

- **Inadequate job evaluation documentation**
  The classification methodology was not well documented.

- **Excess numbers of classes**
  The number of classes had grown without proper justification

- **Understandability**
  Managers and employees did not understand the system.

- **Satisfaction of internal equity criteria**
  Many employees particularly female employees questioned whether the system provided internal equity by providing a system that established a hierarchy based on job worth.

The final recommendations in the Report to Governor Ted Schwinden in December 1982 were made to maintain the current classification system and proceed with efforts to introduce a quantitative job evaluative methods into their current system where practical without disruption to the existing system. Phased introduction over a two and one-half year period was planned but never achieved, as explained below.

1983 Commitment to Comparable Worth

In 1983 the State Legislature mandated that the Department of Administration report the extent to which the statewide classification plan and pay schedules adhere to or fall short of the standard of equal pay for comparable worth. Further, the Department was directed to continue to make these reports until the standard is met.

The State of Montana has utilized current comparable worth principles in measuring and remedying the wage gender gap. An initial study conducted by the Department found that the statewide clarification and pay system essentially met the standard of comparable worth for 92 percent of the state's employees.[16]

Historically, there has existed much debate over comparable worth issues. A basic tenet underlying the controversy is that employees in jobs held predominantly by women are paid less than employees in jobs held predominantly by men, and the jobs, though different, are of equal or comparable worth to the employer.

Comparable worth controversies surfacing as a result of pay discrimination court cases have evidenced the need for employers to keep external and internal equity

issues separate in their thinking about job worth or value.

In a variety of rulings, the courts have recognized job evaluation as only part of the pay determination process. Employers may establish pay policies by analyzing a variety of criteria including economic considerations, the labor market, bargaining demands, and job evaluation results.[17]

The Montana Project The Design of a Comparable Worth Based Job Evaluation System

Whereas the lack of proper planning and design of the first job evaluation system in the early 1970s contributed to the problems that resulted in the abandonment of the first plan, the same cannot be said of the quality efforts expended by the Department of Administration during the four year period following the mandate in 1982 to change the current job evaluation system.

The Department of Administration satisfied their commitment in 1982 to the Personnel and Labor Relations Study Commission. A quantitative, comparable worth based job evaluation system was designed using the most current human resource methodology. The system satisfied the Department's objective from an internal equity perspective. A validated job worth hierarchy was produced for the jobs included in the Statewide Pay Plan.

However, the system was not accepted by the State due to political and administrative constraints. It is our intent in this report to provide a brief overview of the methodology behind The Montana Project. Publications are available that provide an excellent expose detailing the design of the project.[18] Reasons for the failure of the State of Montana to adopt the system will also be analyzed in an attempt to profit from the State's prior experiences.

The Director of the Department of Administration established the Job Classification Enhancement Advisory Council composed of 14 member representatives of the State's workforce, including two from the private sector. The Council's responsibilities included administration and design of the project.

The project staff underwent Generally Accepted Compensation Practices previously outlined in this Report. To review, the staff first conducted a job analysis of the chosen 140 benchmark positions. The benchmark jobs were representative of a cross section of all job classes and all existing pay grades.

The second phase of The Montana Project involved the selection of the compensable factors that were to reflect the relative values of the jobs included in the Statewide Pay Plan. All quantitative job evaluation methods have one thing in common - a set of job factors that form the basis for evaluation. As mentioned earlier, the choice and the weighting of these job factors is critical to the success of the resulting job hierarchy.

The Council considered the parameters for choosing the factors, levels and weights for the new system. The weights signified to the employees the importance placed on the various factors by the State. The levels signified the measurable variations present in the chosen factors. This is the "yardstick" previously discussed and is represented by a series of definitions. These definitions should represent all the information needed to logically

evaluate the jobs that will be included in the system. In addition, documentation of the factor definitions and degrees or levels by the Council needed to be as specific as possible.

The Council met this challenge of establishing a defensible rationale for the choice and the weighting of the compensable factors by using rating panels to rank the benchmark jobs under the following guidelines: (1) the jobs were ranked by considering the whole job; and (2) the jobs were ranked seven times using one factor at a time. The various sets of factor ranking scores were statistically analyzed to preclude the use of factors which overlap or are irrelevant. The factor ranking scores were regressed against the whole job scores. The resulting variance in scores was 97% signifying that the factors were good predictors of job worth.

- **Knowledge and Skills**
  Weight - 40%
  A. Occupational Knowledge
  B. Supervisory/Managerial Knowledge
- **Work Impact Responsibility**
  Weight - 20%
  A. Nature of Responsibility for Impact
  B. Nature of Impact
  C. Consequences of Error
- **Complexity (mental effort)**
  Weight - 25%
- **Human Relations Skills**
  Weight - 10%
  A. Nature of Personal Contacts
  B. Frequency of Contacts
- **Physical Effort**
  Weight - 1%
- **Working Condition Hardships**
  Weight - 2%
  A. Physical Hardships
  B. Work Schedules Hardships
- **Working Condition Hazards**
  Weight - 2%
  A. Severity of Possible Injury
  B. Probability of Injury

Figure 3-5

COMPENSABLE FACTORS DEVELOPED FOR THE PROPOSED QUANTITATIVE POINT FACTOR SYSTEM USING THE A PRIORI APPROACH

"Factor degree levels were determined by analyzing each factor ranking to discover job groupings which represented discrete levels of each factor."[19] Weights were determined by analyzing the rankings by whole job and by job factors. "Each job was assigned a score based on the sum of its step scores, i.e., a job evaluated at the lowest degree level on a given factor was assigned a step score of '1'. Total 'step' scores for each job were then regressed against the whole job criterion ranking in order to generate factor weights."[20]

After this process was completed, the quantitative point factor job evaluation system was field tested by applying the system to a sample of 135 positions.

To this point, the efforts undertaken by the Council represented a quality effort to develop a quantitative, point factor job evaluation system. A validated job hierarchy had been created using current compensation theory and practice **but was not implemented.** The project was abandoned in 1986.

The mistakes made by the Council were not connected with the development of the job hierarchy. The major mistake

involved premature releases of the results.

The results of the job evaluation project was communicated to the employees without the benefit of completing the entire cycle of establishing the relative value of the jobs. A pricing of the group of jobs within the market to determine their worth to competing organizations was not undertaken. A formal pay structure was not designed to balance the internal, external, and individual equity issues; although tentative pay grades were assigned to the job hierarchy.

The initial employee reaction to the effect that the new job evaluation system would have on their jobs was widespread opposition. Employees were only told of the results of the job evaluation system and the placement of the benchmark jobs in the tentative pay grades. Information about their job evaluation results (only a sample had been conducted) and how their pay was to be affected was not available. A lack of understanding of the new system coupled with uncertainty about its effect on their salary created negative reactions about the proposed change in pay relationships.

The State halted implementation of the new system. Some managers were opposed to the job-content approach to job evaluation and favored a market-oriented approach. Skepticism about the costs and internal equity issues were widespread. Labor union representatives and many employees were offended because their input was not sought in the development of the new system. Women's organizations felt that the new system still contained biases that would be a disadvantage to women.

Still cognizant of the need to make improvements in the current job evaluation methodology, the staff reconsidered their options. The primary goal of the Council was to define and establish internal equity by developing a comparable worth based job evaluation system. The basic approach used was *a priori* approach. The weights or the emphasis assigned to each compensable factor were assigned directly by the designers of the system to reflect *a priori* judgments about how much each factor should contribute to the total worth of a job. Some proponents of comparable worth espoused this job content approach because biases that were existent in their current structure or in the marketplace could not materially affect the new ordering of jobs.

A different approach to the selection of factors and weights is policy-capturing. The degree that each factor contributed to the total worth of the job could be derived empirically in such a way as to reproduce as closely as possible the existing wage hierarchy.

The Council undertook the project of again attempting to design a new job evaluation system for the Statewide Pay Plan using an alternate approach. Instead of an *a priori* approach, they used a version of the policy-capturing approach.

"The staff determined that policy capturing could be accomplished relatively easily using much of the previous *a priori* work. The factors and factor level definitions already developed bore a reasonable relationship to existing factors and had been applied to a representative sample of jobs. Using these factors represented a departure from the usual policy-capturing approach in that factors are usually derived from analysis of values underlying the present compensation system. Because it had been decided to utilize the previous *a priori* work in order to obtain the advantages of a

quantitative point-factor system, the only major step remaining for policy capturing was the regression analysis, including analysis of bias, to derive the factor weights and construct the guide charts."[21]

Before conducting the policy capturing analysis, an additional factor, "percent female", was added to the seven compensable factors. The objective of adding this temporary factor was to detect gender bias. If the resulting regression coefficient or weight associated with percent female is substantially different from zero, "femaleness" would be said to be a compensable factor that has entered into the State's pay system. This coefficient was used as an indicator of needed corrections for gender bias.

The regression analysis was conducted. The "percent female" variable, along with the step scores for each benchmark job on each of the seven factors was regressed against each job's current pay grade. "The net effect was to raise average grade levels for females from 74% to 88% of that of males with the remainder attributed to differences in job content. A set of factor weights were derived from the regression equation and appropriate points were then assigned to the existing guide charts."[22]

The resulting quantitative, point-factor job evaluation system has been tested with one department within the State. It has been determined by the Council that the policy-capturing job evaluation system significantly reduces the potential of changes in job relationships within the State.

Recommendations for the Development and Implementation of a New Job Evaluation System(s) for the Statewide Pay Plan

In Section 3, we have discussed the environmental, judicial, and legislative challenges in evaluating the internal equity issues inherent in the Statewide Pay Plan. We have analyzed the advantages and disadvantages of the job evaluation methodologies that the State has historically utilized in establishing the relative value of jobs. We have studied the successes and failures of the State in developing and implementing the various job evaluation systems. Our goal was to obtain a historical perspective with which to balance with GACP.

It is our recommendation that the State utilize an *a priori* approach to developing a quantitative point-factor job evaluation system for the Statewide Pay Plan. We further recommend that the State consider developing two job evaluation systems - one for exempt employees and one for nonexempt employees.

Exempt employees may defined under FLSA as those individuals who are exempt from the overtime requirements of the act if they meet the test for each category. Employee exemption depends on (1) responsibilities and duties, and (2) salary. Nonexempt employees may be defined as those individuals who qualify for the overtime FLSA requirements.

Our recommendations are presented in a question format for purposes of discussion:

■ *Why should the State consider developing two job evaluation systems?*

Due to the polymorphic nature of Montana State Government, we are recommending that two job evaluation systems be developed for the exempt and nonexempt job categories. In considering the need for more than one job evaluation system/pay structure, consideration was given to the culture within the State and the diversity of jobs within current employee demographics.

The State has a history of grouping jobs/pay structures around common union jurisdictional demands. The Blue Collar Plan and the Liquor Store Plans have been developed from the Statewide Pay Plan to recognize differences in the two different employee groups.

The criteria used for clustering jobs into exempt and nonexempt job categories should be related to job characteristics that address the relative value of the job. Such criteria could include:

- Common status with respect to the law (exempt versus nonexempt)
- Common Skills
- Common Function
- Common occupational qualifications

Criteria such as those listed above can be used to identify two separate groups of classes within jobs that can be readily evaluated using a common set of compensable factors designed for each group.

■ *How can the State measure equity in multiple pay structures?*

The State has a familiarity with difficulties encountered with multiple pay structures. Employees may not feel that internal equity goals are met if they perceive that unequal pay is awarded to jobs of equal value due to the placement of one job in a pay structure that is priced closer to market.

We recommend the State establish an auditing process that ensures that justification can be established around the reasonableness and fairness of using more than one pay structure.

The example below is provided that represents one means of auditing the pay process in an exempt and a nonexempt pay system:

(1) From the nonexempt system, evaluate the higher-level, nonmanagement jobs using the exempt job evaluation system.

(2) From the exempt system, evaluate the lower-level management jobs using the nonexempt system.

(3) Determine the pay each group of jobs receive in the other pay plan.

(4) Be prepared to answer the following questions:
- How does each job fare in the other pay plan? Does it appear that under the exempt system, the non-managerial jobs receive an undeserved higher rate of pay in the exempt system than in the nonexempt system? Which jobs receive unduly harsh pay treatment?
- Can the calculated differences be justified?
- Are the jobs placed in the proper job evaluation system?

Answers to these and other related questions will ensure the validity of the two pay structures.

■ *Why should the State adopt an a priori approach rather than a policy-capturing approach to job evaluation?*

We do not recommend that the State choose a policy-capturing approach to job evaluation. Problems with the decision-making process inherent in the current job hierarchy have been emphasized in this Report system founded on poor plan des inadequate documentatic adequate job analysis information. nd subjective decision-mak g is not one that qualifies for the policy-capturing approach.

We do recommend that the State use an *a priori* approach to produce a quantitative, comparable worth point factor job evaluation system. The procedures previously tested were found successful in the sense that a validated job hierarchy was created. We recommend the State use their previous experience to undertake the selection of compensable factors, levels, and weights for the two systems.

■ *Should the State update the current class specifications?*

We recommend that the State undertake the process of updating the current class specifications before designing the task of developing a job evaluation system. The rationale for our recommendation has been previously explained in this Section of the Report.

■ *What can be done to promote acceptance of the new system?*

The State can profit from the mistakes of the past. The backing of the Governor and this Committee is integral to defusing political opposition to change in traditional pay relationships.

We recommend a bilateral (management-union collaboration) approach to developing a new job evaluation system(s). Vital decisions surrounding the design of the system are generally made by job analysts with the help of a job evaluation committee that gives priority to the opinions of management, supervisors, and employees. Employee criticisms may be handled through various forms of union participation on either a formal or an informal basis.

A close working relationship should also be established by the committee with women's groups to eliminate gender bias from the system.

A training program with management and those who will participate in the job evaluation process should be planned and implemented prior to the development of the job evaluation system.

Acceptability will be the governing variable for success. While implied acceptance may signify understanding, retaliation may be undertaken by formally registering complaints through the grievance process at every opportunity with major negative consequences.

Constant clear communication will be the guiding factor in achieving acceptability. The goals espoused by the project should be communicated to all employees. In order to establish credibility with employees, the basic elements of the evaluation system should be communicated to the employees along with an explanation that the final pay structure will be based on internal, external and individual considerations.

This does not guarantee that employees will be completely satisfied with their job's ultimate location in the structure. Nor does it mean that the Department of Administration will be always satisfied with revisions made in the plan as a result of employee or union criticism. Yet both union, management, and employees will have their say, and generalized overall discontent will be separated from a desire for specific changes in the plan design.

■ *How can changes in the evaluation of jobs be made in a systematic process?*

Flexibility built into the system will allow the State to make changes in a systematic process. When faith in the job evaluation system is lost, abuse of the system generally takes the form of classification changes. For example, managers may use the job evaluation system as a reward system. That is, classification changes are requested to obtain a higher pay grade, but the duties of the job have not changed. This can have a ripple effect. When systematic control is lacking and when a job analysis program is not in place, the classification change with no measurable change in job duties can go undetected.

We recommend that the State centralize the classification authority within the Department of Administration and provide the staff necessary to adequately maintain the system. The State should undertake every effort to eliminate dual decision making whenever possible between the Department of Administration and the Board of Personnel Appeals.

We recommend the State use C.A.S.S., the proprietary software developed by the Waters Consulting Group, Inc.

We recommend the Department of Administration use C.A.S.S. as follows:

- The names of all employees along with their current salary, class specification number identifying their classification, and their department code will be transferred from the main frame computer into C.A.S.S.

- The names and an identifying number for all class specs assigned to the job evaluation system(s) will be entered into C.A.S.S. This information may be downloaded from the mainframe computer, as needed to maintain currency.

- All compensable factors used in the job evaluation system(s) along with their levels and weights will be entered into C.A.S.S.

- The results of the job evaluation of each class spec will be entered into C.A.S.S.

- The Job Evaluation Summary Report will be printed using C.A.S.S. providing an analysis of the hierarchy of jobs listed in descending order by total evaluation points. For each class spec listed in the job evaluation system(s), the report also lists the evaluation scores assigned to each compensable factor during the job evaluation process.

- Changes to the class specifications or the compensable factors may be made easily and quickly.

Our firm furnished the software to the State during our pay study, at no additional cost.

NOTES:

[1] Department of Administration, Personnel Division, Classification Manual, Methods and Procedures, p. 1.

[2] Department of Administration, Personnel Division, "House Select Committee on Employee Compensation: Background Report on Clarification and Pay Issues," February 28, 1989, p. 7.

[3] "Employee Handout Training Material", State of Montana, (No date listed).

[4] Richard Henderson, Compensation Management, Prentice Hall, 1989, p. 181.

[5] Personnel and Labor Relations Study Commission, "The Board of Personnel Appeals and the Classification Appeals Process," Staff Report No. 5 by John H. McEwen, Chief Classification Bureau and Eric Trimble, Personnel Specialist, December 28, 1981, p. 15.

[6] Ibid, p. 16.

[7] Personnel and Labor Relations Study Commission, "Final Report to Governor Ted Schwinden and the 48th Session of the Montana State Legislature," December 1982, p. 21.

[8] "Position Description" Questionnaire, State of Montana

[9] Section 2-18-102(2), MCA, State of Montana

[10] Department of Administration, State of Montana, Supervisor's Guide to Montana Performance Appraisal System, (No date given), p. 5.

[11] John McEwen, A professional Paper Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Public Administration, "Position Classification in Montana State Government: A Critical Review," August, 1982, p. 21.

[12] Senate Bill No. 411 (Chapter 440, Laws of 1973) State of Montana.

[13] John McEwen, p. 20.

[14] John McEwen, p. 18.

[15] John McEwen, p. 19.

[16] Department of Administration, Personnel Division, Comparable Worth in State Government (Helena, Montana: The Department, January 1989), p. 1.

[17] Henderson, p. 532.

[18] "Designing a Comparable Worth Based Job Evaluation System: Failure of an priori Approach", Public Personnel Management, Vol. 19 No.1, 31

[19] Ibid, p. 39

[20] Ibid, p. 39

[21] Ibid, p. 41.

[22] Ibid, p. 40

External Equity

External equity can be defined as the process of setting wage rates within a pay plan that conforms to the job's external worth to the State of Montana. External equity is a fairness criterion that demands the pay for all jobs within the State be priced competitively with similar jobs in the marketplace. Salary surveys serve as the primary management tool that defines and establishes external equity.

A key objective of our pay study has been to determine if the survey process has been integral to the process of setting wage rates within the Statewide Pay Plan. Our findings indicate this fairness criterion has not been met. The State has failed to use market data for all benchmark jobs as the driving force in establishing competitive pay rates for employees in the Statewide Plan.

WCG has taken an active role in analyzing the survey responses of the State's January 1990 Compensation and Benefits Survey. Section 4 addresses the major external equity issues in the Statewide Pay Plan. Considerations for improvements in the State's survey process are presented along with our analysis of the survey results.

The Survey Process

The State of Montana has conducted a salary survey each biennium since 1974. The State Employee Compensation Report is prepared for the Legislature in compliance with Title 2, Chapter 18, MCA, which requires that the Department of Administration continually maintain the State classification and pay plans. In their annual survey, the State has included one or more benchmark jobs from the five pay schedules: the Statewide Pay Plan, the Blue Collar Plan, the Liquor Store Plan, the Teachers Plan, and the Physicians Plan.

We recommend that the State institute policy changes that incorporate survey data with job evaluation data in the maintenance of the pay structures for state employees. The survey process should be integral to the maintenance of each pay plan. Instead the State of Montana has historically used the survey data to provide overall statistics relative to certain job groupings. The survey data has not been tied directly to the pay structure to provide guidance for the pay increases and budgetary planning.

The validity of the survey results is dependent on sound survey techniques surrounding the following key survey areas:

- Benchmark Jobs
- Survey Participants
- Job/Class Matching
- Survey Administration
- Statistical Measurements

These major groupings are discussed below.

Benchmark Jobs

The selection of benchmark jobs is always a challenging task. The validity of the survey results may depend on their selection. In addition, the selection of jobs must satisfy employees, management, union groups, women's groups, and ultimately the State Legislature to demonstrate that the survey and its findings are credible. Figure 4-1 illustrates the criteria for selection of benchmark classes of jobs.

In an attempt to facilitate consistency in yearly comparisons, the State has maintained a core of classes of jobs that are surveyed each year. Changes in the selection of benchmark classes are made to reflect the dynamics of the work environment and are documented along with an explanation in the yearly reports. However, caution is advised when interpreting the survey report to note the changes when making yearly comparisons.

- Classes represent a distribution of data from the lowest to the highest levels of jobs.
- Classes are representative of the jobs found in the State to ensure that all segments of the employee population are represented.
- Classes found in the participating organizations are in sufficient numbers to yield substantial data. There is little to gain from surveying a class if only one organization possesses such a class of jobs.
- Classes selected reflect the several salary levels found in the State.
- Classes vary in terms of job requirements such as skills and responsibility. This diversity is important when survey data is combined with job evaluation data to design and maintain a pay structure.
- Classes are not in the process of changing, which would invalidate survey comparisons.
- Entry-level classes and other classes with which the State is experiencing special hiring and retention problems should be included in the survey.

Figure 4-1

CRITERIA FOR SELECTION AS A BENCHMARK CLASS

The State has historically opted to present the results of the salary surveys in a format that groups the benchmark classes of jobs into major occupational categories. In previous surveys, data from all pay plans was grouped collectively into five major categories: Professional, Technical, Clerical, Craft, and Miscellaneous. The reporting format was changed in the State Employee Compensation Report prepared for the 51st Legislature. The grouping was changed to adopt the criteria used by the federal government for reporting Equal Employment Opportunity data. These categories are: Administrators and Officials, Professionals, Technicians, Protective Service Workers, Paraprofessionals, Office and Clerical, Skilled Craft Workers, and Service/ Maintenance.

The choice of presenting the results of benchmark jobs by occupational groups looks to the heart of the State's use of survey data. Primarily the State has used the results in collective

bargaining. Conversely, the collective bargaining process has been the driving force behind determining salary levels for Montana state employees. In our pay study, we have examined salary levels from a different, structural perspective.

Our emphasis has not been to analyze different occupational groups as a unit. This allows us to analyze the pay structure for all employees in order to determine the strengths and weaknesses of equity issues.

Survey Participants

Having selected a set of benchmark classes of jobs, the State must choose survey participants that best represent a relevant labor market. The choices of survey participants for the January 1989 survey represented a computer-generated, random selection from a database of Montana employers provided by the Department of Labor. A group of benchmark jobs were selectively chosen for each major industry group.

While this selection process satisfies the key participant criteria variables of size and industry type, it also limits the State to these variables. We recommend that the State analyze the list of employers and choose the participants by considering all criteria items for determining the State's relevant labor market.

We further recommend the State involve the key policy decision makers and union representatives in the selection of survey participants prior to the survey. This involvement during the planning stage will facilitate the acceptance and the use of the survey results.

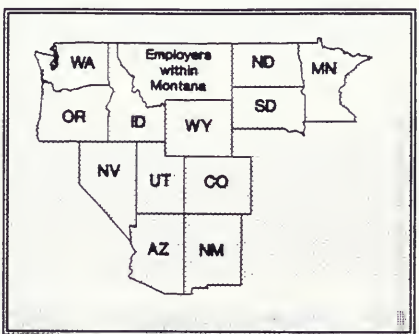


Figure 4-2

STATE OF MONTANA
SALARY SURVEY PARTICIPANTS
1990 SURVEY

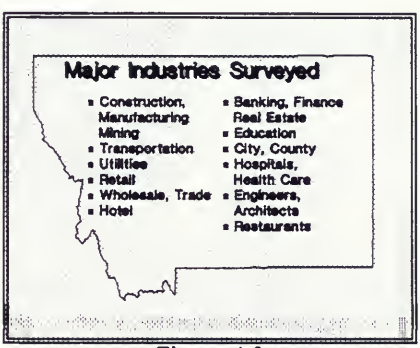


Figure 4-3

STATE OF MONTANA
MAJOR INDUSTRIES SURVEYED
WITHIN THE STATE
1990 SURVEY

Labor markets may be categorized into local, regional, national, or international markets. Given the diverse group of employees within the Montana State Government, Figure 4-2 illustrates the choices made by the Department of Administration to survey employers within the State, twelve state governments, and for the first time, the federal government. While the response was not received from the federal government this year, a good response was received from the participant population in general.

Having chosen the geographic market, the State must

choose the organizations to participate in the survey. For wage and salary surveys, three questions govern the selection of survey participants: (1) To whom does the State loose their employees; (2) Where does the State hire their employees; and (3) To whom does the State compare themselves to?

In addition to the central three qualifiers mentioned above, the following issues should be considered by the State when selecting survey participants:

- Competitors for the State's Employees,
- Geographic Area
- Size of Organization
- Employee Relations Practices
- Profitability
- Industry Type
- Technical Sophistication
- Demographic Variables
- Other Factors

The following is stated in the January 1989 survey report: "The sample of in-state employers was selected to be representative of both large and small organizations and various types of businesses and services found in Montana."[1]

The major industries surveyed in Montana are illustrated in Figure 4-3. The State studied the major industries and the employers with large and small employee groups within each industry.

The State has chosen their larger regional market from the following twelve states shown in Figure 4-2. Figures 4-9 (a, b, & c), produced later in the Section, illustrate survey statistics by State. Other employee demographics are presented in order to provide a basis for making comparisons.

Job/Class Matching

Sound job/class matching is integral to the validation of the survey statistics. Job matching requires survey participants to read the documentation about the job that is sent in the survey packet and determine if their organization has jobs that are similar. The participant should be asked to provide salary information on employees within their organization who are doing substantially the same work as described. The key word is to match the work, even though the title in their organization may be different than the title listed in the survey packet.

The quality of the documentation is critical to job matching. When determining how much documentation is enough, the question arises as to what to include in the survey packet. The choices include: (1) a job title only; (2) a job summary or recap of the information provided in the class specification; and (3) a class specification.

The State has chosen to include in the survey packets a job summary of information that is included in the class specification. This is a satisfactory method, providing the job summary is accurate and well written. We favor sending complete position descriptions or class specifications in the survey packet as it facilitates the job matching process.

The State does not currently ask the survey participants to clarify their degree of similarity with the benchmark classes. We recommend that in future surveys, the State request survey participants match the jobs as either an even match, a heavy match, or a light match.

Survey data identified as either an even, a heavy, or a light match assists in making final decisions for those responsible for making difficult survey decisions as to the validity of the data. When given this job matching identification, the State can decide whether to include the data or whether modification is necessary for the "light" and the "heavy" matches.

- **Even Match**
  A valid "Even" match means that the job in the participating organization has *essentially the same* principal function as the survey class/job and the person performs duties the same as or comparable to most, if not all, of the typical duties in the survey job.
- **Heavy Match**
  If the class/job in the participating organization does *slightly more* than the survey job, it is considered a "Heavy" match.
- **Light Match**
  If the class/job in the participating organization does *slightly less* than the benchmark job, it is considered a "Light" match.

Survey Administration

In the January 1990 Salary and Benefits Survey, the State expanded the data requested from the survey participants to include additional information other than salary data. Questions concerning organizational policies and employee benefits were added requests to this years survey. The State will benefit from an analysis of this additional information.

Specific information was given to the survey participants regarding the job data requests. Figure 4-4 provides an exert from the 1990 Montana salary survey instruction sheet. This exert illustrates the salary information requested from the survey participants.

Read each description to determine if you have the same or similar kind of job. Please do not rely on the title; our titling practices may be different from yours. For those jobs matched, please provide the requested salary information on the "Job Match Response Form." If you do not have a match, write in "no match".

A. Only base monthly salaries are requested. Please do not include merit, bonus, overtime, or other compensation in these figures...

B. On the "Job Match Response Form" the column entitled "Your Monthly Salary Range" asks for the minimum, midpoint and maximum salaries for the particular matched job class. These minimum, midpoint and maximum salaries may not correspond with the actual salaries paid to your employees for that class. What we are looking for is a potential salary range for employees in the particular job class. LIST SALARIES IN EFFECT AS OF JANUARY 1990.

C. The column entitled "Average Monthly Salary" asks specifically for the total of the actual monthly salaries paid to all employees in a particular job class, divided by the number of employees in that class....LIST SALARIES IN EFFECT AS OF JANUARY 1990.

Figure 4-4

EXERT FROM MONTANA SALARY SURVEY INSTRUCTIONS

When comparing salary amounts, it is vital that a common salary statistic is requested. As illustrated in Figure 4-4, the base salary amount is requested. Participants are specifically asked not to include merit, bonus, overtime, or other compensation in the base monthly salary amount. In future surveys, we recommend that the State also request that the participating organizations not include longevity in the base monthly salary amount. If the longevity amount is desired, it should be requested as a separate amount to avoid distortion of base amount.

The survey was administered, as in the past, by the Department of Administration. The steps as outlined thus far in the Report were conducted by the Department of Administration. Survey participants received the following in their packet of survey material:

A. Survey Instructions
B. General Compensation and Benefit Questionnaire
C. State of Montana Responses to the General Compensation and Benefit Questionnaire
D. Supplemental Questionnaire (for state governments and large private-sector employers only)
E. Job Descriptions
F. Job Match Response Form

Changes were made this year, however, in recording and analyzing the survey data as it was received from the participants.

As mentioned above, we have provided the State with a key managerial tool, the C.A.S.S. software. C.A.S.S. consists of programs and data files which allow the effective management of pay data. We converted the following information from the mainframe computers to C.A.S.S.: class titles, class numbers, employee names, employee salary amounts, and employee hire dates.

This information provided the base for studying the current compensation system.

As survey information was received by the Department of Administration, the following survey data was entered into C.A.S.S. for <u>each benchmark job</u>:

- ✓ Class number
- ✓ Class title
- ✓ Region of the State (if an employer within Montana)
- ✓ Number of incumbents holding the job
- ✓ Average base monthly salary
- ✓ Minimum of pay range
- ✓ Midpoint of pay range
- ✓ Maximum of the pay range

The use of C.A.S.S. greatly facilitated the analysis of the survey data. The survey results along with the employee salary data was integral to the cost projections provided in this Report. We recommend the State continue the use of the software in the maintenance of the compensation system.

Statistical Measurements

A wide variety of yardsticks exist to measure survey statistics. In the past the State has chosen to use the simple average as their central measurement of survey data. In addition, a percentage was given that indicated whether the class was above or below the market and the amount.

The following statistical measurements have been used by our firm in this Report as the primary tools with which to analyze the survey results:

■ Weighted Average

We recommend that the State use the weighted average as a substitute for their previous practice of using the raw or unweighted average. The unweighted average is defined for each surveyed class as the total salaries reported by the participants for that class divided the number of organizations responding to that particular class.

A weighted average is a more accurate indicator of the market because it recognizes the number of employees receiving a specific rate of pay from each participating organization. The survey weighted average is calculated in this Report by (1) weighting the results by first multiplying the average salary of each class by the number of incumbents holding that job; and (2) dividing the result by the total number of incumbents reported for that particular class.

■ COMPA-Ratios

We have used COMPA-ratios in this Report as indicators of employees salaries relative to some other pay element. We have also used COMPA-ratios in our projections of salary increase budgets. Figure 4-5 describes the three COMPA-ratios used in this Report.

COMPARISON OF ACTUAL SALARIES WITH MARKET
(Indicates how MT's benchmark salaries compare with the market)

$$\frac{\text{Average MT Salary}}{\text{Market Weighted Average}}$$

COMPARISON OF MIDPOINT OF MONTANA'S PAY STRUCTURE WITH MARKET
(Indicates how MT's pay structure compares with the market)

$$\frac{\text{Midpoints of Mt's Structure}}{\text{Market Weighted Average}}$$

COMPARISON OF ACTUAL SALARIES WITH MIDPOINT OF MONTANA'S PAY STRUCTURE
(Indicates where MT's employees rank in their own pay structure)

$$\frac{\text{Average MT Salary}}{\text{Midpoints of Mt's Structure}}$$

Figure 4-5

DEFINITIONS OF COMPA-RATIOS USED IN THIS REPORT

Recommendations for Improvements in the Survey Process in the State of Montana

WCG's recommendations, as outlined below, for improvements in the State's efforts to address external equity issues are focused in two areas: (1) improvements in the survey process; and (2) improvements in the utilization of the survey results.

- The most critical problem in the State's survey process deals with the utilization of the survey results. Survey results are not directly linked to establishing competitive rates of pay for all employees in the Statewide Plan. Rates of movement of the pay matrix has historically been established through collective bargaining agreements. These negotiated agreements do not represent all employees in the Statewide Pay Plan; yet the salaries of all employees are directly affected by the agreements.

  We strongly recommend the State improve the survey process of collecting market statistics for a representative group of job classes and use sound statistical analysis techniques to make key decisions regarding the State's ability to offer a competitive salary. See Section 6 of this Report for additional information on external equity and pay structure design and maintenance.

- Sound analysis of the survey data is dependent on the statistical measurements used to reflect competitive wages. We recommend the State use the weighted average as the primary statistical measurement. This change would replace the simple average, which has historically been used to compare market data.

  The weighted average will provide the State with more accurate statistics because it recognizes the number of employees in an organization.

- An accurate matching of job duties and responsibilities is integral to the validity of the survey results. The State has never previously attempted to differentiate between job matches.

  We recommend the State request survey participants match the jobs as either an even match, a heavy match, or a light match. Needed adjustments may be made to light and heavy matches in statistical measurements of market comparability and pay structure maintenance.

- We recommend the State re-examine their choice of benchmark jobs to ensure they meet all criteria for selection as a key job. Representative jobs from all pay grades should be included in the selection.

- The selection of survey participants within the major industries within the State have previously been made using a computer-generated random analysis. We recommend institute changes in the selection process.

- We recommend the State continue the use of C.A.S.S., a proprietary software developed by WCG, to analyze survey statistics and maintain the pay structure.

1990 Survey Results

Summaries of the results of the survey data are presented here. Comprehensive survey statistics are presented in Appendices A and B.

Caution should be exercised by the reader of this Report when an attempt is made to compare the COMPA-Ratios from the 1990 survey with the COMPA-Ratios from any previous survey. The statistical measurement used in the 1990 survey is based on a weighted average. The statistical measurement used in all previous surveys conducted by Montana has been the unweighted or simple average. Comparisons will be invalidated by the use of different statistical measurements.

The following provides a guideline for illustrations of Montana's 1990 Survey Results:

- Figure 4-6
  Overall COMPA-Ratios by Grade
  Actual Salaries with Market

  The chart illustrated in Figure 4-6 provides an analysis of the salaries of Montana's benchmark jobs in relationship with the salaries paid in the market. Overall results indicate that Montana's salaries are 18.6% behind the market.

  The format is a summary by pay grade. Details of the results of each benchmark job are included in the Appendix.

- Figure 4-7
  Overall COMPA-Ratios by Grade
  Midpoint of Mt's Pay Structure with Market

  The chart illustrated in Figure 4-7 provides an analysis of Montana's current pay structure in relationship with the market. The midpoint of each pay grade has been compared with the survey market weighted averages. Overall results indicate that Montana's pay structure is set at 18.8% behind the market.

  The format is a summary by pay grade. Details of the results of each benchmark job are included in the Appendix.

- Figure 4-8
  Overall COMPA-Ratios by Grade
  Mt's Salaries with Midpoint of Structure

  The chart in Figure 4-8 provides an analysis of where the selected benchmark jobs place in their current pay structure. The overall COMPA-Ratio indicates that on an average, the benchmark positions were at the midpoint of their pay grades.

  The format is a summary by pay grade. Details of the results of each benchmark job are included in the Appendix.

- Figure 4-9 (a,b,c)
  Comparison of Survey Statistics and Employee Demographics

  Each of the twelve participating States have been highlighted in Figure 4 -9. The survey results from each State have been separated from the remaining participants and compared to Montana's benchmark jobs. In addition, employee demographic data given in the survey by each State has been included for purposes of comparison.

- Figure 4-10
  Sample Comprehensive Survey
  Statistical Analysis for One Class
  of Jobs

  C.A.S.S. presents a detailed analysis of the results of each benchmark job. Figure 4-10 provides an example of one benchmark job.

State of Montana

COMPA–Ratio – Actual Salaries with Market

January 1990

Grade	Based on Survey No. Empl	No. Bnchm	Statistics Montana's Mo Avg	Survey Wtd Avg	COMPA Ratio Actual Avg/ Svy Wtd Avg
18–21	238	11	$3,392	$4,114	82.44%
17	234	7	$2,769	$3,210	86.25%
16	447	13	$2,530	$3,123	81.03%
15	643	18	$2,252	$2,891	77.91%
14	989	19	$1,979	$2,549	77.66%
13	924	17	$1,787	$2,284	78.26%
12	856	14	$1,712	$2,114	80.94%
11	715	12	$1,561	$1,909	81.77%
10	676	10	$1,478	$1,726	85.63%
9	802	13	$1,337	$1,519	88.01%
8	1240	14	$1,212	$1,553	78.06%
7	677	8	$1,194	$1,280	93.30%
6	356	6	$1,246	$1,383	90.12%
4–5	203	6	$951	$1,105	86.06%

These summaries indicate how the salaries of Montana's benchmark jobs compare with market. Details of each grade are provided in Appendices A & B.

Overall COMPA–Ratio – 81.4%

Indicating Montana's salaries are 18.6% behind the market.

Figure 4-6

OVERALL COMPA-RATIOS
BY GRADE
ACTUAL SALARIES WITH MARKET

State of Montana

COMPA-Ratio – MT's Salaries with Midpoint of Structure

January 1990

Grade	Based on Survey No. Empl	No. Bnchm	Statistics Montana's Mo Avg	ontana's Midpoint	COMPA Ratio Actual Avg/ Svy Wtd Avg
18-21	238	11	$3,392	$3,162	107.27%
17	234	7	$2,769	$2,604	106.33%
16	447	13	$2,530	$2,390	105.87%
15	643	18	$2,252	$2,193	102.71%
14	989	19	$1,979	$2,019	98.02%
13	924	17	$1,787	$1,851	96.55%
12	856	14	$1,712	$1,718	99.62%
11	715	12	$1,561	$1,597	97.77%
10	676	10	$1,478	$1,489	99.24%
9	802	13	$1,337	$1,390	96.19%
8	1240	14	$1,212	$1,299	93.30%
7	677	8	$1,194	$1,218	98.05%
6	356	6	$1,246	$1,332	93.52%
4-5	203	6	$951	$1,065	89.31%

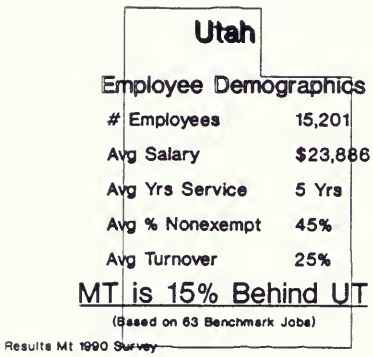
These summaries indicate how Montana's employees rank within their own pay structure. Details of each grade are provided in Appendices A & B.

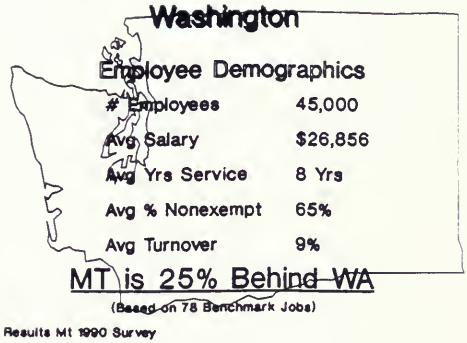
Overall COMPA-Ratio – 100.3%

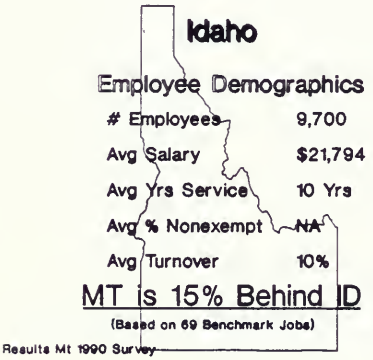
Indicating MT's employees are at the midpoint of their pay structure.

Figure 4-8

OVERALL COMPA-RATIOS
BY GRADE
MT'S SALARIES WITH MIDPOINT
OF PAY STRUCTURE







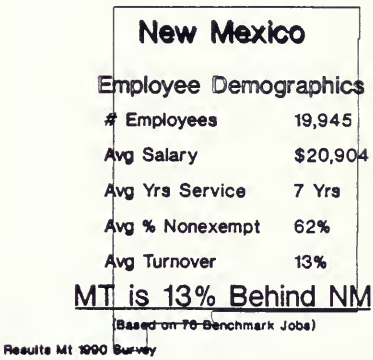
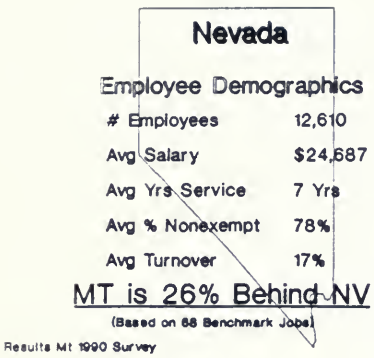
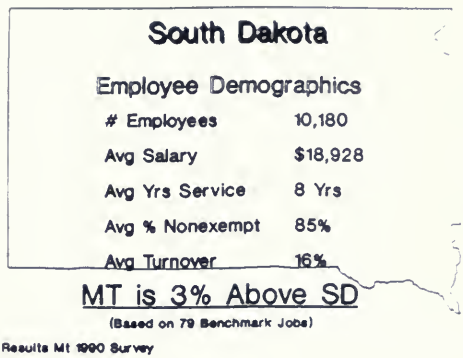
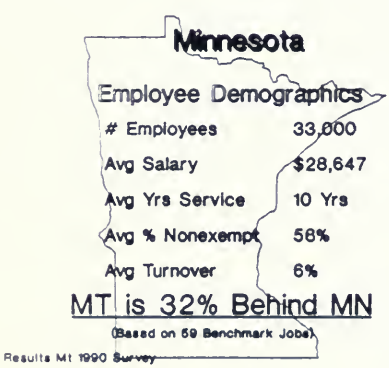


Figure 4-9(a)

COMPARISON OF SURVEY STATISTICS AND EMPLOYEE DEMOGRAPHICS







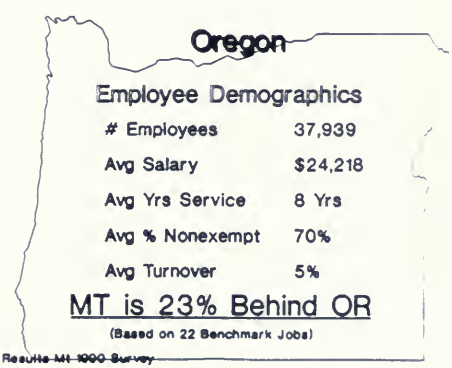
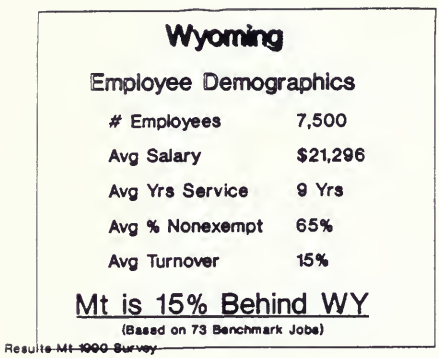
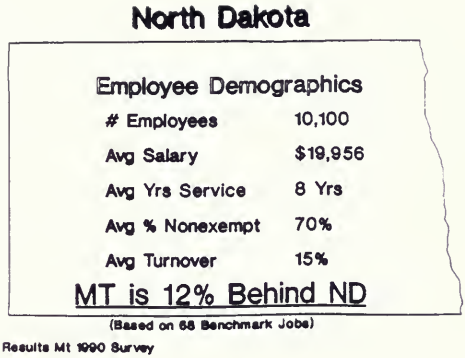
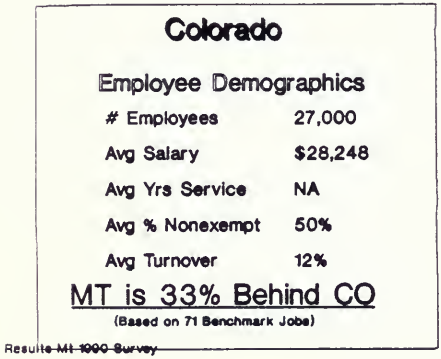


Figure 4-9(b)

COMPARISON OF SURVEY STATISTICS AND EMPLOYEE DEMOGRAPHICS







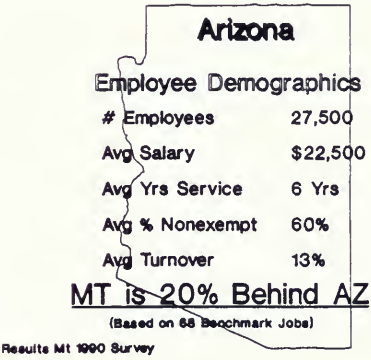


Figure 4-9(c)

COMPARISON OF SURVEY STATISTICS AND EMPLOYEE

Salary Survey for : EMPLOYMENT ASSISTANT

JD Code	Org #	Job Title	Match	Inc	Low	Avg	High	Min	Mid	Max
205006	1203	OS	E	0	0	0	0	1155	1409	1663
205006	1209	OS	E	0	0	0	0	860	1056	1253
205006	1204	OS	E	27	0	1173	0	1171	1431	1690
205006	1212	OS	E	9	0	1209	0	1133	1507	1880
205006	1201	OS	E	19	0	1296	0	1162	1478	1793
205006	1206	OS	E	25	0	1404	0	1196	1494	1792
205006	1210	OS	E	39	0	1757	0	1474	1656	1838
205006	1207	OS	E	15	0	2071	0	1759	1942	2125

Unweighted Average	0	1485	0	1239	1497	1754
Weighted Average		1506			1577	
50th Percentile		1350				
75th Percentile		1581				
Number of organizations with average		6				
Number of employees with average		134				
Number of organizations with midpoint		8				
Number of employees with midpoint		134				

Figure 4-10

SAMPLE COMPREHENSIVE SURVEY STATISTICAL ANALYSIS FOR ONE CLASS OF JOBS

NOTES:
[1] Department of Administration, "Montana State Government Salary Survey," January, 1989, p 2.

Individual equity can be defined as the process of setting specific wage rates within a pay plan that conforms to the incumbent's job performance. Individual equity is a fairness criterion that demands the State reward employees based on their contributions to the attainment of the State's goals and objectives. Performance measurement, management, and rewards are integral to our pay philosophy and are inherent in our recommendations to improve the State's productivity, effectiveness, and competitiveness.

Individual equity has its roots in the pay system, but its existence is dependent on the performance management system. The design of the pay system determines whether the range of salaries is wide enough to allow an individual to earn a competitive salary and if the overall structure is sound. The policies governing the pay system determine the movement of the individual within the pay structure. Movement may be measured by merit, longevity, or a combination of criteria that fit the organization's culture. The courts and common sense demand movement by merit pay increases be supported by a performance management system. Recognizing the issues of improving performance and productivity, human resource professionals have utilized the performance management system to focus employee motivation in the direction that assists in achieving organizational goals. This section of our audit addresses some of these issues.

Range of Salaries

To the Montana state employees range spread represents the least and the greatest amount of money they have the potential to earn. The range spread of a pay grade, as illustrated in Figure 5-1 is the difference between the maximum and the minimum of the grade. When expressed as a percentage, the range is:

$$\frac{\text{Maximum \$ - Minimum \$}}{\text{Minimum \$}}$$

The determination of range spread is dependent on the policies established by the State. In combination with survey data, human factors as well as economic constraints provide the variables with which to estimate the percentage of range spread.

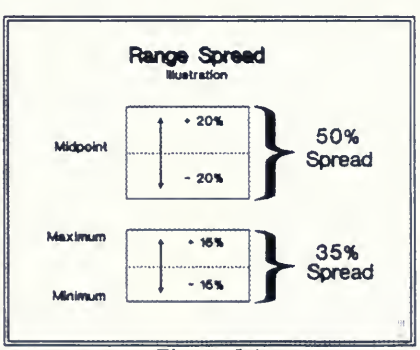


Figure 5-1

RANGE SPREAD IN A PAY STRUCTURE

When designing a pay structure one of the goals to consider is to establish sufficient range from the minimum to the maximum to allow the State to fairly

award adequate pay increases. The greater the range in a pay grade, the greater the opportunity to vary the pay of employees who exhibit a range of performance while doing the same job. If the State is going to pay for performance and/or reward seniority with the pay range, a greater spread will be needed to accomplish these goals. Promotion policies are also to be considered.

Movement Within Pay Ranges in the Statewide Pay System

Movement within a range may be defined as awarding a base-rate increase to move an employee forward in the pay range assigned to his/her job. Even though there is a performance appraisal system in place, a reoccurring complaint has been that the State of Montana does not reward job performance. This has been confirmed in testimony to the Compensation Committee as well as in our own employee interviews and our review of the records.

Currently the pay ranges within the State Wide Plan are divided into thirteen steps, approximately 2% apart. Previous to Fiscal Year 1986, an employee advanced one step on the pay matrix for each year of service on his/her anniversary date. An employee at Step 13 was not eligible to receive additional step increases. The impact has been that with the exclusion of promotion or reclassification, length of service has been the major criterion for movement in the Statewide Pay Plan.

The design has provided for automatic increases based on longevity. However, economic realities have forced a severe restriction on movement within the pay ranges. Step increases have been frozen in the Plan since Fiscal Year 1986 causing severe individual equity issues to develop. The longevity criterion has been further violated when new employees are brought in at wage rates the same or higher than employees who have been frozen in step.

The Argument for Productivity Improvement

Some of the movement techniques in a pay plan are illustrated in Figure 5-5. Experience tells us that employers are generally in agreement that "better" employees should receive more money than "poorer" employees. The question is one of measurement. How is a "better" employee measured?

Employers who award longevity increases are promoting the theory that "better" is defined by length of service: the longer an employee is with the organization, the "better" or more productive he/she is. Such organizations are fostering an entitlement sentiment in their reward system, or to put it into other words, an "I'm entitled to it" rationale among employees is encouraged.

Employers who award merit increases are espousing the theory that "better" or more productive employees are measured by the performance of the individual. Measurements may be made using a output-based approach or a behavior-based approach. Such organizations are promoting an "I've earned it" rationale.

Recognizing the difficult issues related to improving performance and productivity, we recommend the State of Montana devise compensation strategies devised to focus employee

motivation in the direction that assists in achieving the State's goals: the "I've earned it" rationale.

The State is continually asking their employees to achieve increasingly higher levels of quality and public service. The State must be able and willing to give something of value back within that environment to recognize and reward those individuals for their ongoing commitment.

We recommend that the State discontinue assuming that commitment can be measured by length of service only. We recommend that the State adopt policies that reward within-range pay increases on the basis of merit or a combination of merit/length of service as illustrated in Figure 5-5. The goal should be to develop a strategy to provide incentives to unleash discretionary effort or to go beyond the expected level of performance. These incentives do not exist in the current system.

INCREASES BASED SOLELY ON LENGTH OF SERVICE

- Step Rate - Automatic

INCREASES BASED SOLELY ON MERIT

- Merit - Based Only on Performance

INCREASES BASED ON A COMBINATION OF LENGTH OF SERVICE AND MERIT

- Step Rate - Variable
- Step Rate and Merit
- Merit and Another Variable
  1) Based on Performance and Position in Range
  2) Based on Performance and Position in Range Using Variable Timing
  3) Policy Framework

Figure 5-5

MOVEMENT WITHIN THE RANGE TYPES OF BASE-RATE INCREASES IN PAY

The following provides an overall discussion of awarding within-range increases based on longevity and performance. The Department of Administration is developing a report for the Committee that lists the advantages and disadvantages of the adoption of each major type of plan listed in Figure 5-5. However, we are including a summary of the advantages and disadvantages of merit and seniority pay.

Within-Range Increases Based on Length of Service

As stated above, the State of Montana has an entrenched system of awarding pay increases based on length of service or longevity. The Statewide Pay System is designed to awarding step rate - automatic increases annually.

While this approach is suspect from a motivational perspective, there are advantages to using the automatic approach to within-range increases for some job family groups. The best applications of the step-rate automatic method include routine jobs with limited performance variability. In addition, the process also acknowledges the desire to reward seniority for certain skill-based craft positions.

Potential disadvantages include the inability to acknowledge different rates of progress among employees. Movement, motivation, and learning ability cannot be differentiated based on performance.

Within-Range Increases Based on Performance

Figure 5-6 lists the primary considerations to be made by the State before any form of merit-based pay policy is adopted. These conditions focus on measurement and management issues. An understanding of these commitments is integral in both the design and the implementation phase of converting to any performance-based pay system.

Accomplishing the goals of the State of Montana requires strategic performance management at every level within the work force. Performance appraisal systems designed without strategic linkage to the goals of the organization result in the creation of unnecessary work - an exercise in paper shuffling - which is difficult to eliminate once created. The strategic performance management system that we are recommending for the State of Montana serves three basic functions in a performance-based pay system.

Provides a basis for salary actions by:

(a) Tying observable behavior to pay; and
(b) Reinforcing desired behavior.

Supports the State's goals and objectives by:

(a) Encouraging employees to ask what they can contribute to the State that adds value; and
(b) Defining how they are to make their contributions.

Serves as a useful tool for encouraging continuous improvement by:

(a) Recognizing the employee's performance;
(b) Providing performance feedback to the employee; and
(b) Providing records for future career opportunities.

- Individual differences in job performance should be measurable.
- Individual differences in job performance must be significant enough to merit the time and costs required for the State to measure them and relate pay to them.
- The pay ranges should be changed to allow for adequate differentiation of pay based upon performance. (See Figure 5-4.)
- The State should make improvements in the performance appraisal system; so that the process is job-related. (See Section 3 of this Report.)
- The State should make improvements in the supervisory and managerial training that supports the performance appraisal system.
- Management must be committed, and employees including union representatives must be receptive to making distinctions between employees based upon performance.
- Sufficient control systems must be implemented to ensure that merit-increase guidelines are followed. Central control should be placed with the Department of Administration.

Figure 5-6

MERIT PAY CONSIDERATIONS

Recommended Performance Management System

The measurement of performance occurs on the job daily throughout the State of Montana. The performance standards established by the State determine the quality of the public services offered its citizens.

Performance may be measured by *design* or by *default*. If the appraisal process happens by default, the control is stripped from the State and placed in the hands of "chance." The public *will* appraise the performance of State employees, and if not controlled, "chance" will govern their acceptance or rejection.

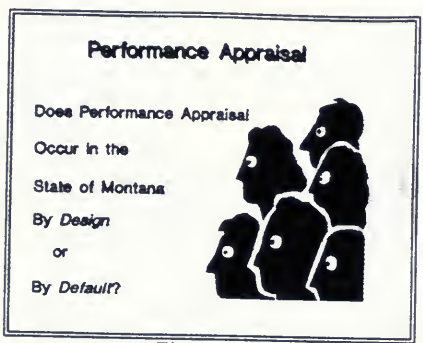


Figure 5-7

PERFORMANCE APPRAISAL IN THE STATE OF MONTANA

A good performance management system will allow the State of Montana to monitor organizational goals and effectiveness. It should be designed to be specific, objective, job-related, measurable, and should be based on how well the employee has performed the assigned job for the rating period.

The responsibility for the success of the performance management system is all inclusive and rests with employees, management, and the Legislature. A sound system of performance management must have the support of the Legislature and must be designed and maintained by management and employees.

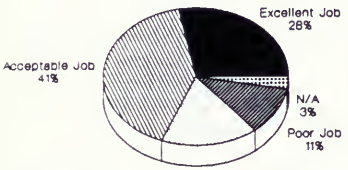
We have reviewed the performance appraisal documentation. We also conducted an opinion survey of the personnel staff within the various Agencies to determine the implementation of the performance appraisal goals established by the State. We found documentation of the goals of the performance appraisal process. Results of an opinion survey conducted by our office of Agency Personnel Officers indicated an inconsistency in the application of the system. We recommend the State adopt a new performance appraisal instrument and institute adjustments in policies regarding performance appraisal. In addition, we recommend the State institute a validation system regarding the performance appraisal process.

The following discussion provides recommendations for improvements in the appraisal process.

Survey Results Performance Appraisal in the State of Montana

During our pay study, we conducted an opinion survey of the personnel officers within each Agency. The results are illustrated in Figure 5-8.

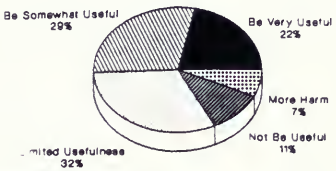
State of Montana
Performance Appraisal
Survey Results - State Agencies
April 1990



Question:

Please Evaluate the Quality of the Appraisals Performed By Your Supervisors Considering Their Abilities, Knowledge And Actual Practice. What % of Your Supervisors Do An....

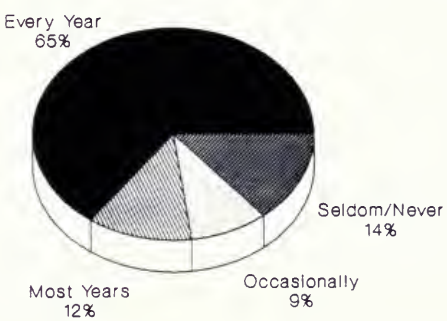
State of Montana
Performance Appraisal
Survey Results - State Agencies
April 1990



Question:

Please Evaluate the Quality of the Appraisals Information & How Useful the Information Would Be in Supporting a Personnel Action. What % of Employees Have a Formal Record of Performance That Would...

State of Montana
Performance Appraisal
Survey Results - State Agencies
April 1990



Question:

What Percentage of Permanent Employees In Your Agency Have Performance Appraisal Completed on an Annual Basis?

Figure 5-8

SURVEY RESULTS - PERFORMANCE APPRAISAL

In conducted our survey, we contacted each personnel officer within each Agency. As a representative of the Agency, we were requesting their professional opinions or impressions regarding various questions centering around performance appraisal. The Agencies were very cooperative in responding to the survey.

Figure 5-8 provides the results of three of the five questions. The results indicate that only 65% of permanent employees have performance appraisal completed on an annual basis. In addition, the results indicate that formal records of past performance would not be useful in supporting a personnel action. Over one-third of the Agencies responded that they have not used the performance appraisal form recommended by the Department of Administration, but have customized their own instrument.

In testing the validity of the performance appraisal process, we discovered that records do not exist within any centralized department in the State of Montana that document the current implementation of performance appraisal in the Agencies.

The goals and objectives as listed in the Appendix of this Report have not been met in the State of Montana with any degree of consistency or under any standardized conditions.

Legal Issues in Performance Appraisal

The recommendations in this Report concerning the proper design of a performance appraisal system will be addressed from (1) the prospective of satisfying the performance appraisal goals established by the State, and (2) from the perspective of an awareness of the legal issues of court cases that have reached the Federal Appeals or Supreme Court that relate to compensation issues.

Our recommendations to the State have been driven by the 6 following GACP practices related to the performance appraisal process:

1) Job Analysis and Performance Standards

Performance rating methods must be based on thorough job analysis. The appraisal of job performance must be based upon an analysis of job requirements as documented in performance standards.

Class specifications developed through a sound process of job analysis serve as a basis for making specific assessments in the performance appraisal process regarding how each of the assigned responsibilities has been carried out. Formal, objective, and written performance standards provide the criterion used to measure an employee's performance and should be based on written class specifications. Section 3 identifies the need to update the existing class specifications for State employees.

Performance standards must be measurable or observable, controllable, realistic, and understandable. The employee's performance should be tracked by measurements of quantity, quality, timeliness, and/or costs.

2) Behaviorally-Based Performance Dimensions and Standards

Performance dimensions and standards should be job related and behaviorally based, so that all ratings can be supported by objective, observable evidence. The performance appraisal instrument recommended by the State for use by the Agencies is discussed later in this Section. In the open-ended approach used by some Agencies in the State, caution should be exercised concerning the combination of dimensions that should be rated separately. The State should avoid using abstract trait names such as loyalty and honesty, unless they can be defined in terms of observable behaviors.

3) Communication of Performance Standards

Appraisal of job performance only becomes effective when performance standards have been communicated and understood by employees.

Whenever possible, the employee should be included in establishing performance expectations. Even if standards are already set for the job, the employee can still be included in planning how the standards will be achieved or in setting personal goals to exceed them. Discussion of key performance areas should focus on the most important outputs of the employee's job. If these key performance areas are not pre-determined, they should be created and agreed upon together by the supervisor and the employee. If this is not possible, at the very least an employee should know what is expected of them in writing.

4) Rating Scale Design and Development

Raters must use the same rating scales, and ratings must be scored under standardized conditions. Clearly defined sections or dimensions of job performance should be rated, rather than be undefined, general measures of job performance.

Performance dimensions should cover the most important aspects of the job. Aspects should not be included that are not important to overall job performance. Dimensions and standards should be weighted to avoid improper or unacceptable emphasis.

The State of Montana currently does not operate the performance appraisal process under standardized conditions. The Department of Administration does not have the authority to properly enforce the implementation of the process. We recommend the State monitor and validate the performance appraisal process as explained below under the authority of the Department of Administration.

5) Validation of Performance Appraisal System and Raters

Appraisal forms and instructions to raters are an essential part of the appraisal process and require validation and documentation.

The State currently provides the Agencies with a recommended performance appraisal instrument and training materials that explain the process. Agencies may choose to either use the supplied documentation, develop their own documentation, or not participate in the performance appraisal process. These current practices lead to problems in the areas of validation and consistency. Recommendations

are given later in this Section that addresses these issues.

6) Employee Appeal of the Appraisal Process

Provide a mechanism for appeal if an employee disagrees with a supervisor's appraisal. An appeal procedure does not guarantee that employees will agree with their ratings or even agree with the rating system. An appeal procedure does provide a less formal means of redress than the court system and assures the employee that accountability extends from the ratee to the rater and the entire appraisal process. An adequate grievance procedure is currently in place in the State of Montana. Agreement should be established with all union representatives.

Recommendations for the Development of a New Performance Appraisal Process

To develop the performance appraisal system, the jobs within the State will be clustered into job families. Each job family will have a specific performance appraisal document or manual. A sample of job family groupings that we have used in the past include:

Administrative/Clerical
Dispatcher/Telecommunications
Professional
Managerial
Fire Supervisory
General Maintenance Worker
Equipment Operator
Working Supervisor
Law Enforcement Supervisor
Technically Skilled
Mechanic
Supervisor
Inspector
Law Enforcement Officer
Clerical Supervisor
Data Processing

Our recommended approach to the appraisal instrument development process utilizes committees comprised of employees designated to be evaluated using these appraisal instruments. Employee committees are formed to provide input on the performance criteria and weights. A committee is formed for each job family and is made up of individuals employed in the classifications within the respective job family.

This process may be facilitated by the use of draft manuals that provide performance standards commonly found in the respective job families. Specific job-related standards may be added to these draft manuals.

We recommend that the committees will also be guided through the development process by competent professional assistance from the staff within the Department of Administration or from outside consultants. Updated class specifications should be utilized as resource aids.

The performance appraisal manuals created by the committees typically contain ten to twenty-five job-related items. A separate performance appraisal instrument containing performance criteria tailored to the duties performed by the positions included in the grouped classifications, are developed for each job family. The performance dimensions in the performance appraisal instrument are job related so that all ratings can be supported by objective, observable, and where possible, measurable evidence.

The participation by employees and supervisory personnel in this phase has proven to be extremely successful in both the public and private sector. The committee process and subsequent

review by management facilitates understanding of the basic tenets of performance appraisal by employees and results in a quality, defensible appraisal system that is accepted.

The committee work will then be reviewed by Agency heads and the Department of Administration for content and validity.

Performance Appraisal Standards

The performance appraisal instrument developed by the committees consist of items of performance called standards. Each standard should be objective, observable, and job related. Each standard is a statement defining expected job performance.

Dimensions

Related standard items are grouped into dimensions. For example, all standards having to do with how an individual relates to other people are grouped together into a dimension called "Interactions." When the evaluations are analyzed, this method of grouping standard is helpful in providing feedback.

Scales

For each standard, a scale of 1 - 5 should be used when evaluating an employee. The rater will use the following definitions:

1

Unacceptable
Does not meet many job performance expectations and/or fails to demonstrate sufficient ability or intent to perform all aspects of the job effectively. Corrective counseling has or will be initiated.

2

Below Job Expectations
Does not meet major job performance expectations, or consistently perform all duties effectively, or demonstrate adequate work or conduct skills needed to perform the job satisfactorily. Does demonstrate potential and willingness to improve and; meet job expectations.

3

Meets Job Expectations
Meets job performance expectations. Demonstrates good work quality, quantity, timeliness, initiative, and dependability. Demonstrates effective interaction with co-workers in the achievement of work unit objectives.

4

Superior
Exceeds most and meets remaining job performance expectations. Consistently demonstrates exemplary ability and initiative in completing high quality work so as to expedite the achievement of the work unit's objectives.

5	**Outstanding** Significantly exceeds performance in all aspects of the job responsibilities. the employee demonstrates the highest level of work quality and makes extraordinary contributions to the work unit.

Priority Weights

Each of the standards in a job family should be assigned a priority weight, which is a measure of its importance to the organization within the particular job family. The standards considered to be critical have higher priority weights than those standards considered to be important. The priority for each category is set on a scale of 1 to 3.

The scale is an arithmetic progression in which a priority of 3 is three times more important than a priority of 1. For scoring purposes, the weights acts as multipliers. The weighting scale is further defined as follows:

PRIORITY WEIGHT 3:
Critical to the position and goal attainment.

PRIORITY WEIGHT 2:
Very important to the position and goal attainment.

PRIORITY WEIGHT 1:
Important to the position and goal attainment.

Implementation

The following implementation guidelines and recommendations are provided for the State's consideration in implementing the performance appraisal system:

1. An instruction manual which provides instructions to supervisors on how to rate employees using the performance appraisal instruments will be provided to each supervisor.

2. All supervisors will receive specific training on the performance appraisal forms to insure understanding of the forms and their use.

3. The new performance appraisal system should be phased in by using the system for probationary evaluations, to be followed by full system implementation for all employees.

It is our recommendation that at least one complete cycle of the performance appraisal system should be implemented before the State of Montana attempts to phase in any goals centering around a pay-for-performance system. It is vital that necessary improvements to the system be initiated during an initial one-year cycle, with system review and refinement being conducted on a continuing basis.

In making sure that the system achieves its objectives it is also important that all supervisors are effectively trained in the performance appraisal process. Before a policy decision is made on pay for performance, employees should have confidence in the performance appraisal system. Pay for performance in an organization as large, diverse, and complex as the State of Montana is a major undertaking, but one that has our full endorsement and confidence.

Maintenance

A key objective of the State of Montana's performance appraisal system should be flexibility. Care should be taken that the documentation does not become an end, but rather a means to the greater end of improved employee performance.

As each cycle of evaluation is complete, management should generate and review the performance appraisal process. On at least an annual basis, input concerning improvements in the performance appraisal process should be solicited from employees and supervisors. Some suggested methods for collecting input include questionnaires issued on a random basis and/or the reconvening of the performance appraisal committees (employee development groups.) The purpose would be to make changes and/or modifications to the specific performance appraisal instruments.

Validating the Performance Appraisal Process

In the area of performance appraisal, the key management tool to effectively validate the performance appraisal process is the Performance Appraisal Management Software (P.A.M.S.). The software has also been developed by the Waters Consulting Group to assist the user in managing the results of the performance appraisal process. Information is maintained on a PC computer and can be exchanged between C.A.S.S. and P.A.M.S. The use of C.A.S.S. with job evaluation, salary surveys, and structure maintenance is explained in Sections 3-4 and 3-6 of this Report. In the area of performance appraisal, P.A.M.S. or similar software should be used in the following manner:

- A report should be printed that provides a profile for each employee that clearly indicates how their performance compares to other employees and to the goals of the executive and managerial staff of the State of Montana.
- A report should be printed that provides a profile on the overall employee strengths and weaknesses and lists specific individuals who need additional training, other job assignments, or corrective action.
- An evaluator analysis report should identify evaluators who significantly deviate from standard norms. This helps to reduce bias in evaluation and, if present, provides a means for eliminating it. The system should also analyzes the performance appraisal manual and identifies any design problems that need correcting.
- The system should help maintain a historic account of past performance. This is extremely useful in determining if there is improvement over time and if so, how much and in what areas.
- The system allows flexibility to design reports to make a variety of group/individual comparisons
- The system has the capability to provide information for organizational studies. By making it possible to compare almost any given data or groups of individuals against any other data or groups of individuals, the system can easily and inexpensively be used to research a variety of employee productivity questions, such as the relationship between specific skills and individual productivity.

- The system has the side benefit of identifying candidate qualifications for job openings. The system automatically develops a profile of the most highly productive employees in the unit coupled with any demographics. Based upon these profiles, it is possible to identify the behavioral standards of the most highly productive persons currently in the job.

Figure 5-9 illustrates the variety of computer-generated reports that are recommended for proper maintenance.

Individual Employee Analysis
- Lists employee scores by performance category
- Lists employee strengths
- Lists employee weaknesses
- Lists employee scores by dimension
- Summary

Organization Unit Analysis
- Lists all employees by rank order
- Analyzes each performance category
  - -- *Statistical evaluation*
  - -- *Lists employee names*
  - -- *Summary*
  - -- *Lists organization units' strengths*
  - -- *Lists organization units' weaknesses*
- Analyzes each performance dimension
  - -- *Statistical evaluation*
  - -- *Lists employee names*
  - -- *Summary*
  - -- *Lists organization units' strengths*
  - -- *Lists organization units' weaknesses*
- Analyzes overall employee scores
  - -- *Statistical evaluation*
  - -- *Lists employee names*
- Analyzes optimum choices
  - -- *Lists employee names in rank order by performance category*
  - -- *Lists employee names in rank order by dimension*
  - -- *Lists employee names in rank order by total score*

Evaluator Analysis
- Statistical evaluation
- Lists names of employees evaluated
- Lists performance categories scored above group mean
- Lists performance categories scored one or more points below group mean
- Lists persons evaluated one or more points above group mean
- Lists persons evaluated one or more points below group mean
- Summary

Performance Appraisal Manual Analysis
- Lists performance categories and frequency scored
- Lists performance categories and frequency of 1-5 scoring

Contents of Performance Appraisal
- Lists dimensions
- Lists performance categories
  - -- *Standard for each*
  - -- *Potential score of each*
  - -- *Priority for each*
- Lists evaluators and priority weight assigned
- Lists employee history

Figure 5-9

SUMMARY LIST OF STANDARD COMPUTER-GENERATED REPORTS

Strategic Planning

Building equity into the Statewide Pay Plan is a matter of judgment founded by organizational philosophy and compensation strategies. No one set of rules can be offered in the design process. It is a procedure that moves from abstract theories to precise hard facts using various tools to guide its structure. The final pay system must be structured to ensure that the tools (i.e., job evaluation, salary surveys, and structure design) have been interpreted accurately. The accuracy of the current Statewide system is seriously doubted by the writer. From the job analysis process to structure design, we have pointed to several significant problems in this Report. In order to make future definitive decisions, the State of Montana must be able to: (1) recognize differences in the final pay structure and the market trends; and (2) understand why these differences exist.

In our pay study, we have used several management tools and statistical indicators to evaluate the policies and practices governing state employee compensation in Montana. Sections 3, 4 and 5 of this Report detail our audit findings and recommendations for the fundamental improvements in internal, external, and individual equity issues.

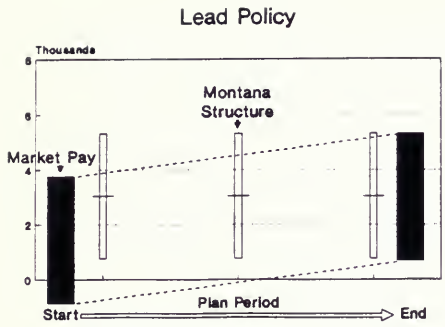
Market Strategy

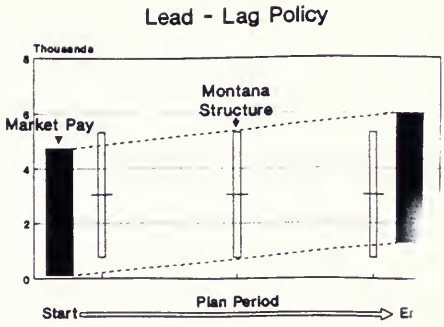
The stated philosophy of the State of Montana is to provide an equitable compensation program for all state employees. The State has not utilized sound market strategies to provide guidance in attracting, retaining, and motivating employees. The State has not systematically awarded compensation that is commensurate with the individual's ability, responsibility, and contribution toward the State's goals.

The State is not exempt from the complexities of remaining economically sound while providing a meaningful fair wage for its workforce and ever increasing services to the citizens across the state. Private sector employers have faced these same issues for the last several years. The constraints experienced by the State and its employees have been evidenced in emotional testimony before the Committee and in the results of Montana's January 1990 Salary Survey. This survey indicates the State is approximately 18.6% behind the market.

Given the current economics, it is our recommendation that a five year phase-in plan be followed. We recommend the State initially adopt a 10% lag policy. It must be understood, as explained below, that this policy positions the State into a 10% lag at the beginning of the implementation period, while the market continues to move during the plan period. A re-examination of the market is required each year to determine the State 's relationship to market.

Figure 6-1 illustrates the three basic market strategies centering around adopting a lead, lag, or lead-lag pay policy.





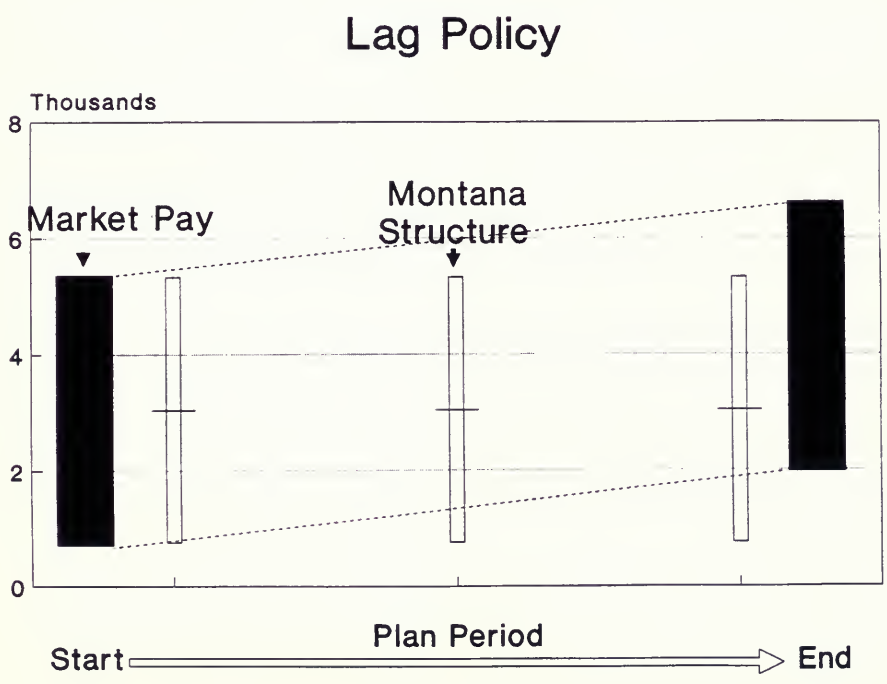


Figure 6-1

MARKET POLICY OPTIONS

Each policy defined below and illustrated in Figure 6-1 assumes that the pay structure remains constant throughout the plan period while the competitive pay in the marketplace moves gradually upward:

- **LEAD POLICY**
  Set your pay structure to match competition at the end of the plan period. Doing so makes your structure lead the competition during the entire period.

- **LAG POLICY**
  Set your pay structure to match competition at the beginning of the plan period. Doing so makes your structure lag the competition during the entire period.

- **LEAD-LAG POLICY**
  Set your pay structure to match competition at the middle of the plan period. Doing so makes your structure lead the competition during the first part of the plan period and lag during the last part of the plan period.

The goal of the five year plan would place the state employes at a position of 5% behind market. The process would develop as follows:

- Year One - Establish market position at a 10% lag and add 1%.
- Year Two - Establish market position at a 9% lag and add 1%.
- Year Three - 8% lag plan
- Year Four - 7% lag plan
- Year Five - 6% lag plan
- Afterward - 5% lag

Compensation Strategy

The State is concerned with providing a compensation framework to inspire the development and progress of each employee. Our recommendations in this Report thus far have highlighted internal, external, and individual equity issues separately. These issues need to be blended into new pay policies, adopted by the Legislature, and implemented by all employees in the State. The operative word is "blend".

Our observations during this pay study have indicated that the State has previously addressed issues on a myopic basis. Compensation design issues facing the State include: (1) balancing external, internal, and individual equity interests; and (2) making long-term strategy decisions regarding adjustments to pay. The State has not consistently weighed both design issues in administering the compensation program.

An example of Montana's myopic approach is the tradition of allowing the collective bargaining process to drive these compensation design issues. As stated in the Research Report prepared for the Committee by the Montana Legislative Council, "The collective bargaining process has been instrumental in determining salary levels for Montana state employees. Since enactment of the first statewide pay plan in 1985, the Legislature, with few exceptions, has statutorily adopted pay schedules reflecting negotiated economic settlements. Because the statewide plan covers both unorganized and organized employees, the Legislature, through adoption of the negotiated plans, has granted unorganized employees the same pay increases as

union members. In addition, negotiated settlements have impacted salary increases for legislative and judicial branch employees, although these employees are exempt from the statewide pay plan."[1]

We are in support of the collective bargaining process in Montana as a contributing factor in formalizing compensation strategies by those positions under contract. We do not support the process as the sole contributing factor for establishing pay strategies for all state employees. It is an easy way out of a complex planning process and will lead to the disarray found in the current Statewide system. GACP must be followed for the system to service the needs of all the citizens and the employees. This could include allowing certain job groups to move at a more accelerated rate than those involved in the negotiated contracts.

Pay Structure Design

Section 3 contains our recommendations for dividing the current Statewide Pay Plan into two separate pay plans using an exempt and a nonexempt job evaluation system. Figure 6-2 lists some of the decisions and issues in determining the design of each pay structure.

- How many grades are the structures to have?
- How wide should each range be?
- How far apart should midpoints of those ranges be?
- How much overlap between grades should be allowed?
- What is the lowest rate of pay that can be offered for a job that will entice the desired quality of employee?

Figure 6-2

TYPICAL QUESTIONS WHEN DESIGNING OR AUDITING A PAY STRUCTURE

Building a pay structure is not an exact science. We recommend the State adopt an integrated approach to defining the internal, external, and individual equity issues in the design of each of the proposed pay structures.

In building these two structures, the internal job worth as established by the job evaluation system should be balanced against the external job worth as established by the marketplace. In designing the pay structure, we recommend that individual equity be established by providing movement in the range and

a performance appraisal management system.

GACP has established the following operational criteria that must be examined to assess the degree to which a salary structure achieves equity:

- **EXTERNAL EQUITY**
  Weighted Average
  COMPA-Ratios
- **INTERNAL EQUITY**
  Midpoint Progression
  Percent Overlap
- **INDIVIDUAL EQUITY**
  Range Width
  Progression through the Range

Before we discuss these issues, we must address the compression problems existing in the current Plan. Then, major structure design considerations in building equity in the two proposed pay plans will be discussed. Finally, the design problems that exist in the current Plan will be discussed along with suggestions for improvements.

Compression in the Statewide Pay Plan

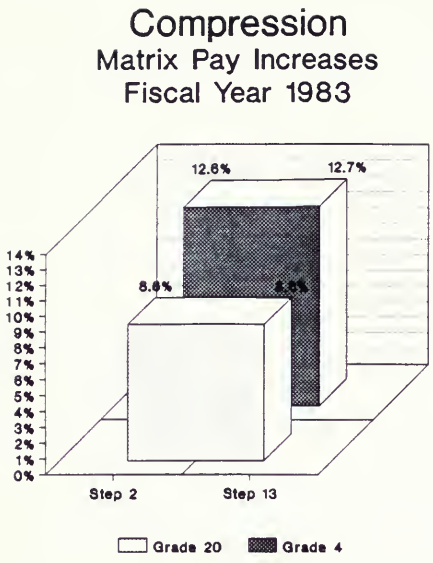
Compression is a problem of pay distribution. A discussion of some of the structure design problems that create compression is presented here.

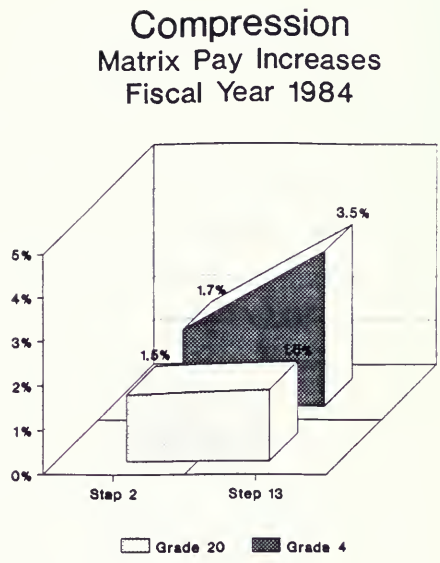
Since 1975, differences in pay increases in various grade levels have contributed significantly to the compression that exists in the Statewide Pay Plan. Lower grades have traditionally been given higher pay increases.

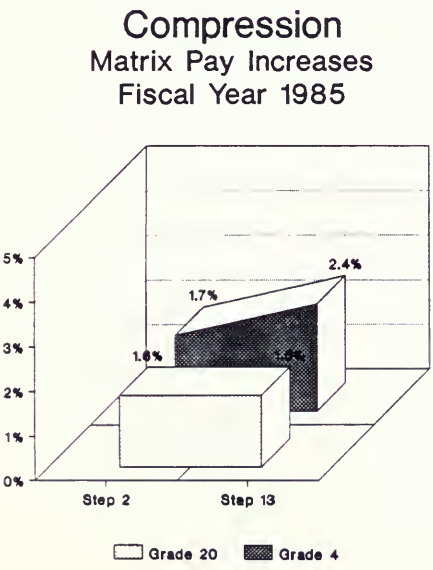
The current tradition of adjusting the pay matrices has created problems in the current Plan. Since 1977, most general increases have been in the format of a flat dollar amount for everyone or, usually a combination of a flat dollar and a percent increase,. Flat dollar increases have resulted in a compression of salary differences in the Statewide Plan.

For example, an individual making a base salary of $1,000 per month would receive a $50 per month increase or 5% of the base monthly salary. The same amount, $50 per month, would be granted to a position that was making $3,000 per month or a 1% of the base monthly amount. Over time, this has contributed to compression.

Figure 6-3 (a) & (b) illustrate this difference by analyzing the pay increases awarded to grades 4 and grade 20 for the Fiscal Years 1983 through 1990.







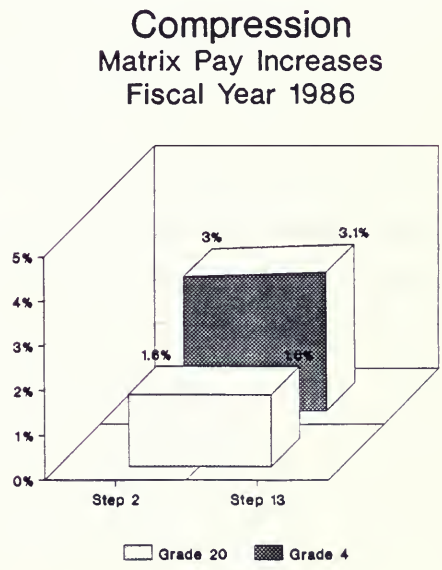
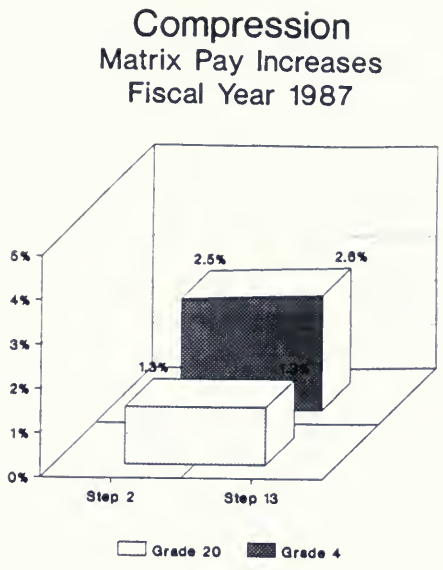


Figure 6-3 (a)

PAY INCREASES FOR GRADES 4 AND 20



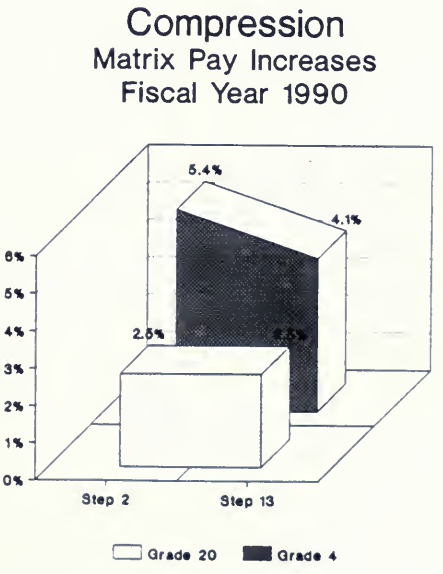


Figure 6-3 (b)

PAY INCREASES FOR GRADES 4 AND 20

The current tradition of adjusting the pay matrices has created problems in the current Plan. Since 1977, most general increases have been in the format of a flat dollar amount for everyone or, usually a combination of a flat dollar and a percent increase. Flat dollar increases have resulted in a compression of salary differences in the Statewide Plan.

Survey Results

Avoiding pay compression problems entail sound compensation strategies. In designing and maintaining a pay structure, survey weighted averages and COMPA-Ratios are measurements used to establish competitive rates of jobs. Graphics are provided in the pages to follow that provide a visual image of market pay within the existing pay grades in the Statewide Plan.

Figure 6-4 illustrates a scatter diagram that displays the survey results from the January 1990 Survey. The graph is plotted using the existing pay grades as a scale for the horizontal (the X axis). The vertical axis (the Y axis) represents the monthly salaries paid by survey participants for jobs included in the survey.

Figure 6-5 illustrates the same scatter diagram discussed above with the current Statewide Plan imposed on the survey statistics. COMPA-Ratios are given in Section 4 for each grade, as well as for the structure as a whole.

The graph presented in Figure 6-5 gives meaning to the issue of external inequities in the Statewide Pay Plan. The scattered dots represent the monthly salaries of surveyed benchmark jobs in the market as defined by the State. The three curvilinear lines represent the pay structure of the current Statewide Pay Plan. The lower line represents the minimum, or the least amount the State is offering for jobs in the respective pay grades. The top line represents the maximum amount the State is offering for state jobs that have been matched to the market as being comparable.

Figure 6-6 illustrates what the Statewide Pay Plan would look like *if* the structure had been designed using the current job evaluation system and *if* the midpoints of the structure had been placed at market.

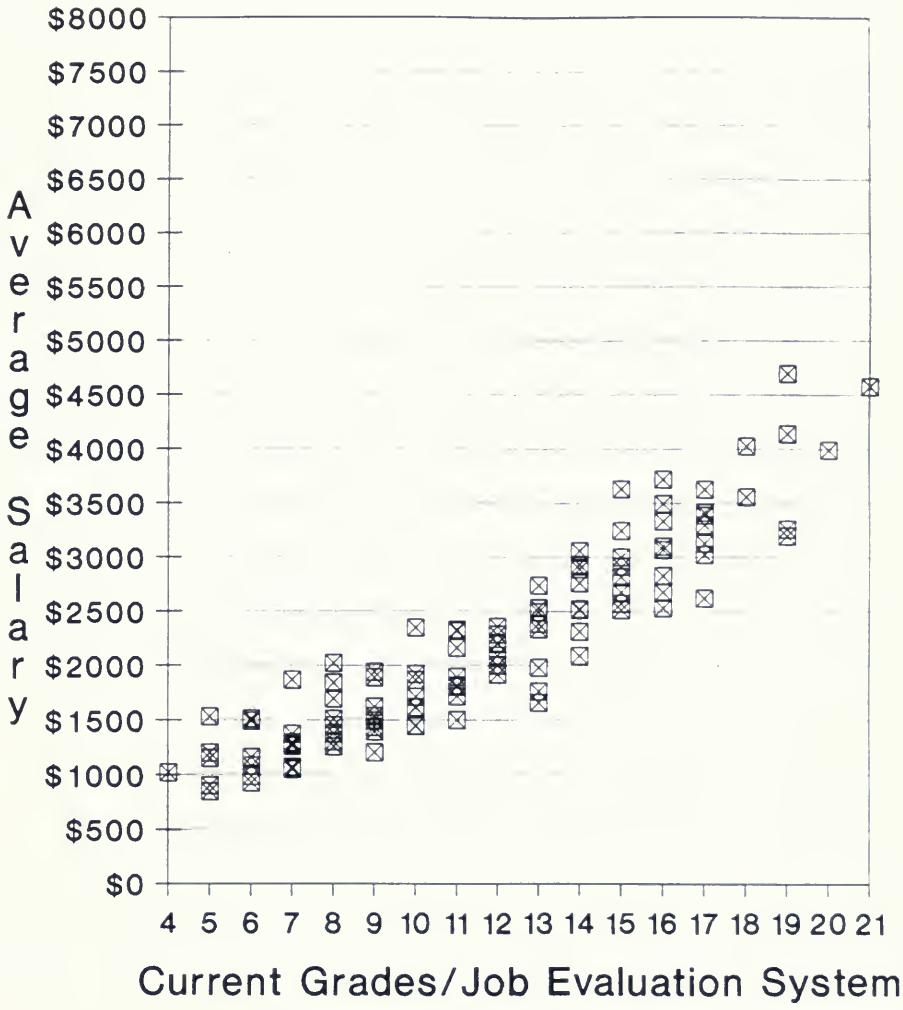
In developing a pay structure around market statistics, an analysis of the graph is made to investigate any jobs that are "out of line" with the others in the grade. These differences need to be resolved and may visibly illustrate a job evaluation problem within the organization.

Figure 6-7 illustrates a pay structure that has been designed using a 10% lag policy. This illustration is provided for discussion purposes only and does not represent our recommended approach to the inequities within the current Plan. Adoption of the pay structure illustrated in Figure 6-7 and in Figure 6-6 would only address the external equity issues facing the State.

A job evaluation system needs to be developed before superimposing survey data over current structure. In other words, we need to be correct in our established hierarchy before we make sweeping decisions about goals of implementation. Internal and individual equity issues would again be ignored if the State were to ignore these facts.

State of Montana

Survey Average Salary



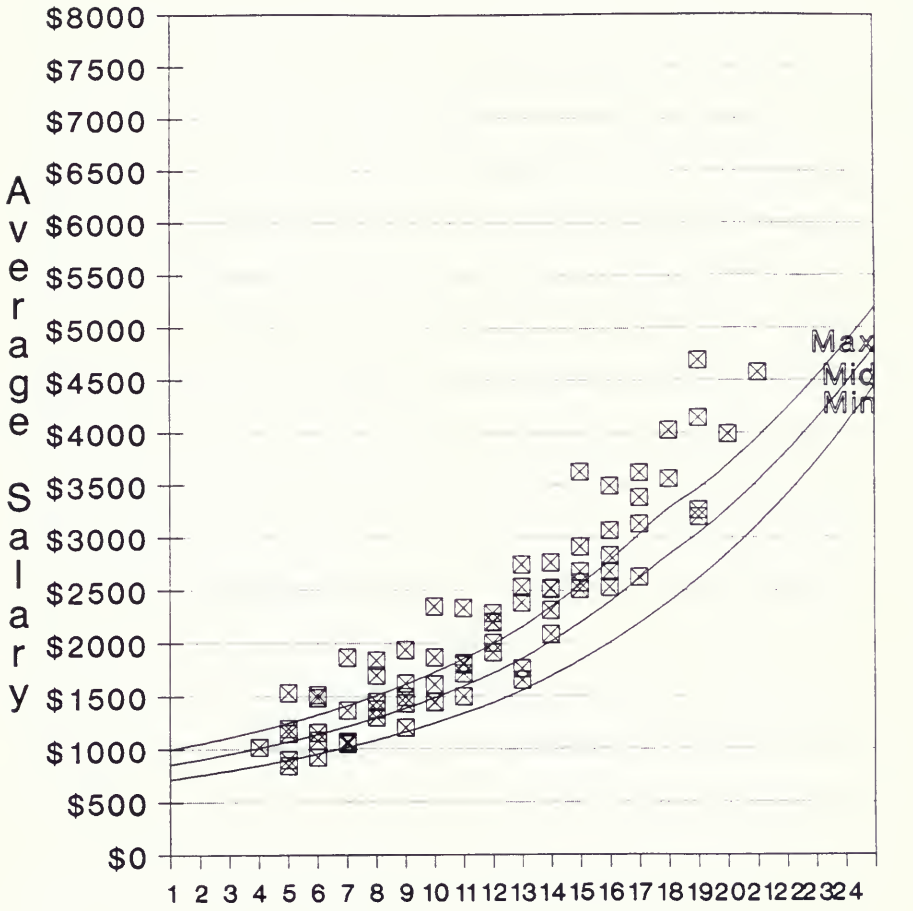
Dots Represent Jan 1990 Survey Results

Figure 6-4

RESULTS JANUARY 1990 SALARY SURVEY

State of Montana

Current 1990 Statewide Pay Plan

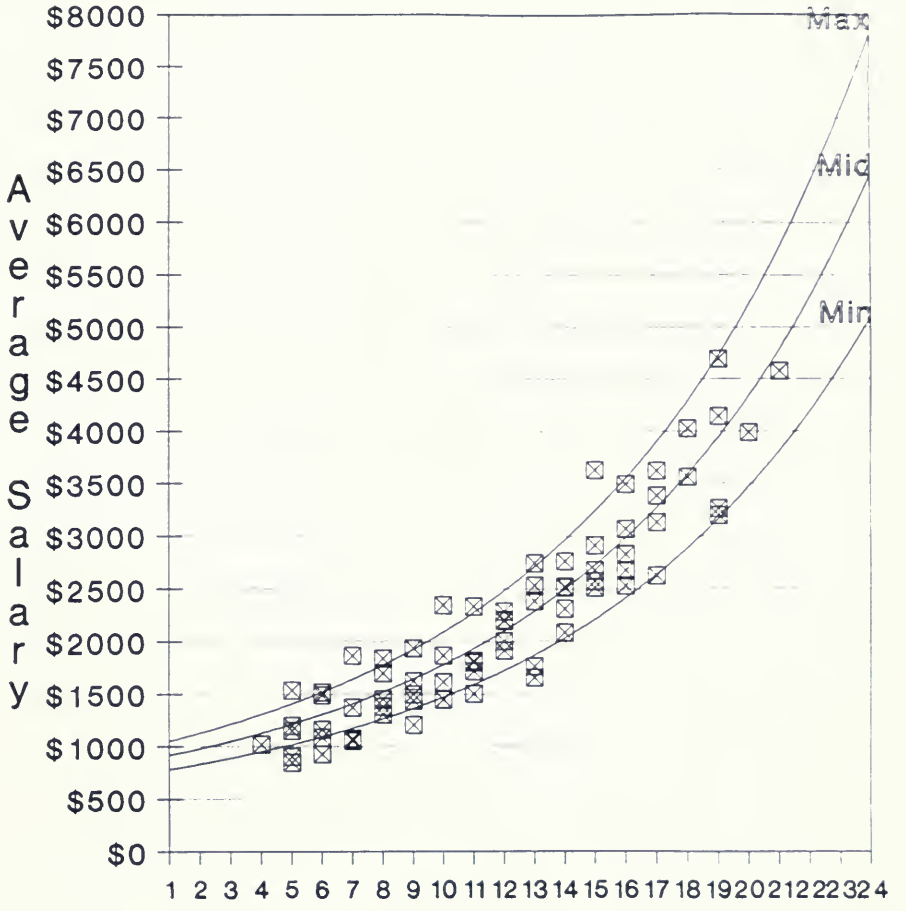


Dots Represent Jan 1990 Survey Results
Curved Lines Represent 1990 Structure

Figure 6-5

State of Montana

Example - Pay Structure at Market



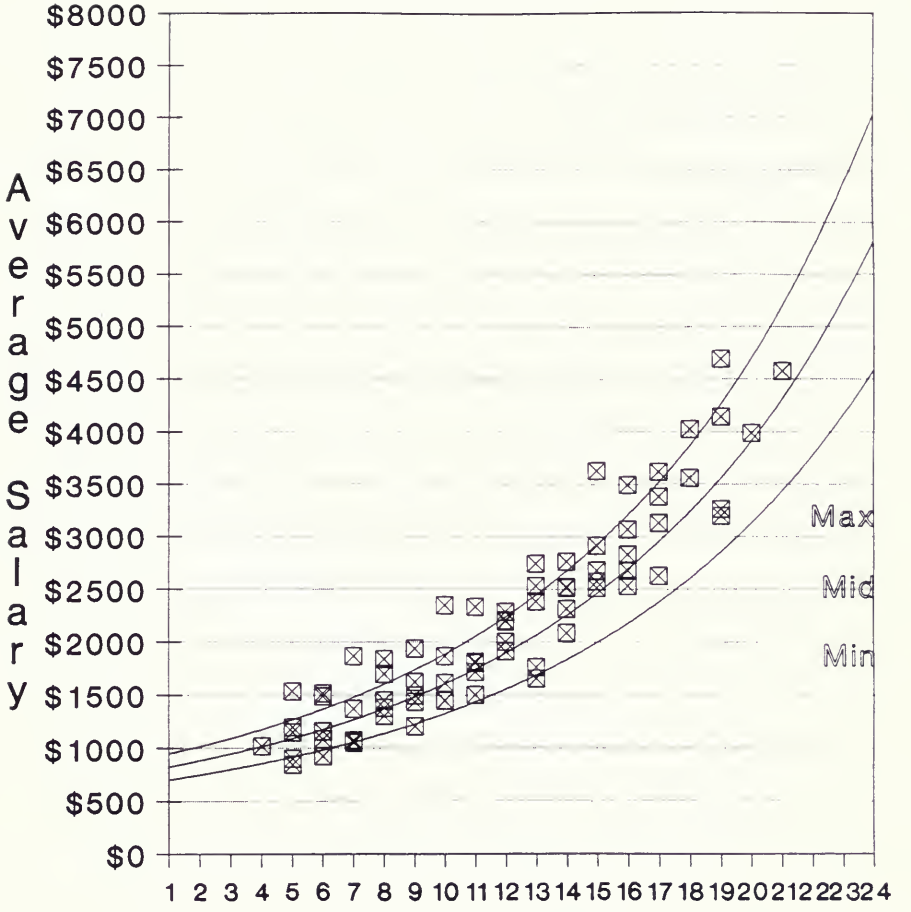
Dots Represent Jan 1990 Survey Results
Curved Lines Represent Pay Structure/Mkt

Figure 6-6

EXAMPLE - STRUCTURE @ MARKET

State of Montana

Example - Pay Structure
At 10% Below Market



Current Grades/Job Evaluation System

Dots Represent Jan 1990 Survey Results
Curved Lines Represent Pay Structure‹Mkt

Figure 6-7

EXAMPLE - STRUCTURE @ 10% LAG

Midpoint Progression in the Statewide Pay Plan

This equity criterion expressed as the midpoint progression, has not been applied consistently across all pay grades in the Statewide Pay Plan.

Figure 6-9 illustrates the midpoint progression established for fiscal years 1976 and 1990. The graphics provide a visual image of the impact policies have had in the higher pay grades. Sharp differences in job worth are noted by the drastic turns in the progression line. For example, the rate of job worth actually decreases between grades 18 and 19.

Figure 6-10 illustrates the midpoint progression that should be present in the Statewide Plan using the existing salary survey data and job evaluation system.

In designing the two new proposed pay system, it would be necessary to develop new midpoint progressions that would apply to the new job hierarchies created by the exempt and the nonexempt job evaluation plans.

of knowledge, skills, and abilities in the group of positions justifies a range spread that increases progressively from the lowest to the highest levels of job grades.

GACP offers guidelines to be used for projecting the range of spread of a pay grade. Figure 6-13 illustrates a useful guide that has been developed around different employee groups. These guide have been developed with using actual survey data.

According to GACP, a narrow pay spread such as a 35% range spread is reserved for entry-level positions. One of the rationales underlying the more narrow spread lies in the shorter span of time that is spent by the employees in the entry-level jobs. Opportunity is generally available for the entry-level employee to progress to higher-level positions within a short period of time.

Alternately, a wider spread of 50% is designed for upper-level higher skilled jobs. A greater amount of time is generally spent before an employee becomes a fully competent performer. The individuals holding these jobs are generally career personnel who have reached the top of their career ladder and need room to grow internally.

MAJOR GROUP	RANGE SPREAD
Nonexempt:	
Laborer and Trades	Up to 25%
Clerical, Technical, Paraprofessional	15%-40%
Exempt:	
First-level Management. Administrative, Professional	30%-50%
Middle and Senior Management	80%-100%

Figure 6-13

TYPICAL RANGE SPREADS - FOR EMPLOYEE GROUPS[3]

Other Key Design Issues

Once the State of Montana has established the proposed two pay structures addressed above, a number of other policy issues that we have offered suggestions on must be addressed. Some of the most important of these are listed in Figure 6-16. The State must develop its own answers to these questions and establish policies and procedures to facilitate consistent practices throughout state government.

- What should the starting rate be for new hires?
- How should employees move from the minimums to the maximums of the pay ranges established for their jobs?
- What influence, if any, should increases in going market rates, and increases in the cost of living, have on the determination of pay increases for individuals?

Figure 6-16

POLICY DECISIONS REGARDING STARTING PAY RATES AND PAY INCREASES

Starting Rates of Pay

The State's current policy of starting all employees at Step 1 of their assigned pay grade regardless of experience or background has created severe recruiting problems for all Agencies. There are some circumstances when a pay exception may be granted to hire a new employee above the first step.

In establishing policies for the two new recommended pay plans, we propose the State adopt the following policy regarding starting salary:

Based on the State's ability to pay and through salary surveys and job evaluation, the salary range of each should be determined that defines the pay opportunities for that job.

The lower third of the salary range would be used for starting salaries as follows:

1) Meets Minimum qualifications: Starting Salary - Minimum of Range

2) Meets minimum qualifications, plus some job-related experience or education beyond the minimum qualifications: Starting Salary - up to 4% over Minimum

3) Meets minimum qualifications, plus substantial job-related experience or education over and above the minimum qualifications for the new job. Starting Salary - up to 8% Over Minimum

In all cases,

- The starting salary should be at least at the minimum of the new range.
- All starting salaries must be coordinated with the Department of Administration.
- A starting salary above 4% over the minimum requires approval of the Department of Administration upon recommendation by the Agency Head.
- A starting salary above the minimum must be justified in writing by the hiring manager and placed with the personnel file. It is important that the minimum requirements for the job be well defined.

We recommend that the individual's current salary is not to be the primary consideration in determining the starting salary. The salary range along with the person's qualifications are the primary considerations.

When an employee is hired, we recommend they be subject to a three to six month probationary period depending on the position. Jobs requiring more skills, knowledge, and abilities should have longer probationary periods.

The probationary period is designed to 1) allow the State an opportunity to observe the new employee's ability to perform the assigned duties, and 2) focus the supervisor's attention on the need for intensive training. The employee's progress should be monitored, documented, and discussed with the employee throughout the probationary period.

We recommend the employee's supervisor complete a written performance appraisal at the end of the probationary period. The results of the appraisal will determine whether employment becomes permanent. No salary action should be associated with the appraisal which relates to the probationary period, unless the employee has been under a trainee status (pay below minimum.) If the employee has been under a trainee status, successful completion of the probation should result in an increase to the minimum salary.

Pay Increases

We have recommended the adoption of two new pay plans using an exempt and a nonexempt job evaluation system in Section 3 of this Report. Figure 6-17 lists the major policy issues that will determine the type of pay increases to be awarded to employees in the two new proposed pay systems.

INCREASES TO BASE RATES OF PAY

- **General (or Across-the-Board) Increases**
- **Cost-of-Living Increase**
- **Promotion Increase**
- **Within-Range Increase**

INCREASES IN ADDITION TO BASE RATES OF PAY

- **Bonus Based on Performance**
- **Longevity Award Based on Length of Service**

Figure 6-17

MAJOR TYPES OF PAY INCREASES

General (or across-the-board) increases (ACTB) are those which are awarded in equal percentages or equal dollar amounts to employees in the pay plan. Neither length of service or performance is a factor in the ACTB increase. A word on general ACTB increases to all employees - **B A D.** This type of increase should be reserved for emergency purposes only, such as a major correction to the system. We make this statement

because general ACTB increases reward all employees the same amount regardless of longevity, performance, or job responsibilities. Some discrimination needs to be exerted.

A cost-of-living increase (COLA) is a specific type of ACTB increase that is generally tied to the Consumer Price Index. We recommend that only the structure be changed, if warranted, for the same reasons stated above.

Within-range increases are types of base-rate increases which move employees forward in their assigned pay grade and range. Within-range increases are awarded on some criteria surrounding length of service or performance. Section 5 of this Report provides an overview of the advantages and disadvantages of awarding longevity/merit increases.

While ACTB and COLA pay increases are normally decided on a year-by-year basis, promotional and within-range increases are an integral part of the design of the pay structure. The structure should be designed with an appropriate level of overlap to satisfy internal equity considerations. If within-range policies are established to move employees between the minimum and the maximum of the pay grade based on performance, the range of salaries must be appropriate to satisfy individual equity considerations.

The State has long compromised individual equity considerations by historically choosing to award within-range pay increases in automatic 2% steps based on years of service. Section 5 addresses the individual equity issues regarding this policy. We recommend the State adopt policies that reward within-range pay increases on the basis of merit or a combination of merit/length of service. These decisions should take into consideration the job families involved and union negotiations for certain job classes. **These are policies decisions.**

The Department of Administration is developing a report for the Committee that lists the advantages and disadvantages of the adoption of various types of within-range pay increases.

The discussion thus far has centered around pay increases that are added to bases rates of pay. The State also has experience with providing increases that are paid in addition to base rates of pay.

In the previous pay study in 1982, the State investigated the advantages and disadvantages of awarding a performance-based bonus payment. A recommendation was made by the Personnel and Labor Relations Study Commission that a non-base-building, pay-for-performance, bonus system be instituted for all employees not represented by a collective bargaining unit. Bonus amounts for employees represented by collective bargaining would continue to be a negotiating element. The State did not implement this recommendation. To do so would have necessitated major revisions in the Statewide Pay Plan. We feel that this is the wave of the future, and that the State should re-evaluate its position on this matter. The personnel study in 1982 was ahead of its time.

Longevity pay has long been an element in the Statewide Pay Plan. An employee is entitled to receive a longevity allowance if he/she has completed five years of uninterrupted state service. The longevity amount is the larger of $10 a month or 10 percent of the difference between the base compensation for his grade and step and the base compensation for the next highest grade and corresponding step multiplied by the number of completed, contiguous

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five-year periods of uninterrupted state service.

Figure 6-18 illustrates the effect longevity pay has on employee income within the Statewide Pay Plan.

State of Montana

Longevity Pay

March 1990

Statistical Source
Montana's Payroll Database

Longevity Pay All Employees	Total State Empl	Total Employees Receiving Longevity	Total Yearly Longevity Pay	Total Yearly Salaries Including Longevity	Longevity As a % of Total Salaries
		Employees Paid by the Dept of Administration			
Statewide Plan	9,023	5,135	$2,655,876	$183,007,392	1.5%
Physician's Plan	9	4	$12,636	$721,644	1.8%
Teachers–Deaf/Blind	29	0	$0	$622,848	0.0%
Teachers–Institutions	48	26	$5,160	$1,137,744	0.5%
Blue Collar Plan	873	538	$190,680	$20,114,928	0.9%
State Liquor Plan	113	57	$14,304	$1,855,728	0.8%
Totals	10,095	5,760	$2,878,656	$207,460,284	1.4%

Note: These Statistics D o Not Include Exempt Employees
or Classified Employees in the Education System.

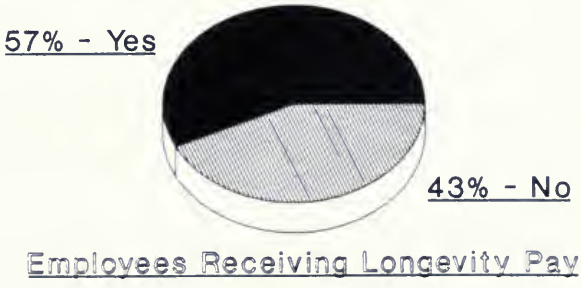


Figure 6-18

LONGEVITY IN THE STATEWIDE PAY SYSTEM

Compensation Administration Issues

Equally important to the design issues addressed above, firm compensation administration issues must be established for the State. After the pay structure has been designed, the success of the program rests with workability, understandability, and acceptability by management, labor, and employees. Success demands constant maintenance, without which the best-designed pay structure will ultimately fail.

From time to time, adjustments will need to be made to the pay structure. As the organization compares itself with its external competitors, the need to adjust the pay structure may surface. Economic and social trends may cause pay rates to fluctuate and jobs themselves to change in response to technological and social variances. Jobs also change in their relative value to the organization necessitating a questioning of the compensable factors and their respective weightings. Re-evaluation of selected jobs may be necessary. Changing needs within the State may, in the future, be best serviced by building a new, separate pay structure for a family of jobs that are now included in the Statewide Plan.

This scenario is descriptive of the work environment today in Montana State Government. Relationships have changed since the inception of the Statewide Pay Plan in 1975, and the Committee has been mandated to study these changes.

In the development of our recommended two pay plans using an exempt and a nonexempt job evaluation plan, the following administrative policies must be established by clear legislative action:

- **Responsibility for the Plans**
  The responsibility of the design, implementation, and administration of the compensation program should be given to the Department of Administration. We recommend that Agency Heads should be held accountable within their respective areas of responsibility.

- **Level of Participation in the Plans**
  We recommend the unions and employees join with management in becoming heavily involved in the design and the implementation of the new compensation program.

- **Communication Openness**
  Open communication is essential to the degree of acceptance of compensation goals.

- **Standardization and Centralization in the Administration of the Plans**
  All administration of the compensation plan should be centralized in the Department of Administration.

Implementation Strategy

The opportunities for growth and economic development of the State of Montana center around defining a core strategy that is built on the State's competitive strengths - a flexible, professional managerial staff in position, an historic pioneering spirit, and the presence of a dedicated work force who are concerned about their work environment.

A new compensation plan designed to promote the future growth and economic development of the State of Montana must be a dynamic system flexible enough to resolve problems yet to be encountered and specific enough to provide guidelines to promote a learning organization - one that encourages experimentation in a participative approach by both management, unions, and employees that goes beyond merely sharing a little information and a bit of decision-making authority. Increased job satisfaction should thrive in an environment where employees perceive that their compensation plan is equitable, and where employes are freed to identify problems and opportunities, to go after them, and to receive recognition for their accomplishments.

A Participative Approach

We recommend the State adopt the goal of building management philosophy and employee input into each phase of designing and implementing the two recommended pay plan to replace the current Statewide Pay Plan.

The following represents our recommendations for goals for the design and installation of two new pay plans using a participative approach.

- *Employees will participate in a general orientation and communication session at the beginning of the project.*
- *Employees will complete a job description questionnaire which will be used in preparing the classification specification and as a resource aid for other project phases.*
- *Interviews with selected employees will be conducted after completion of the job description questionnaire to assure accuracy and understanding.*
- *Employee committees will be created to assist in the development of performance appraisal documents.*
- *Employees will be informed of the project status and project results.*
- *Management and union representatives will participate in a special orientation session to elicit their support throughout the project.*
- *Management and union concerns and issues will be considered during the installation process and in all design aspects.*
- *Management and unions will be involved in all project phases to assure understanding.*
- *Committee(s) will be utilized for job evaluation.*
- *Management will review various project elements and will make key policy decisions relating to adoption*

and implementation of the pay system.

Two primary benefits result from this participative approach. First, the final program is belongs to the state employees -- custom-designed to fit the unique managerial requirements and work environment of Montana State Government. Secondly, this participation generally fosters understanding and acceptance of the program -- key ingredients to the success of a performance-based program.

Timetable for Implementation

Recommendations have been presented in this Report that address market strategies and compensation strategies. A timetable for implementation of our recommendations is presented in Figures 6-19 and 6-20.

The discussion below provides an overview of our recommendations.

- **Phase 1 - Development**
  - Beginning July 1990, retain Pay Plan 90.
  - Make improvements to all major areas addressed in this Report. Two separate pay structures will be developed for the exempt and nonexempt job evaluation systems. Survey statistics from the salary survey to be conducted January 1991 will be used. A job-content based performance appraisal system will be developed along with a training program. In designing the two pay structures, consideration will be given to internal, external, and individual equity issues. Key policy decisions may be made during the year regarding within-range pay increases.

    Refer to Sections 3, 4, and 5 for a detailed explanation of the recommendations for each major area to be addressed.

- **Phase 2 - Trial Implementation**
  - Beginning July 1991, increases to base salary should be based on an analysis of new survey data in relation to the two new pay structures developed in Phase 1.
  - Test the performance appraisal system. Make all needed adjustments during this trial period.

- **Phase 3 - Full Implementation**
  - Award pay increases based on policies developed for each pay system in Phase 2.
  - Monitor all phases of the system to ensure that the goals and objective have been attained and are being fully implemented.

Closing Comments

To implement any adjustment utilizing the current salary survey techniques and the present job evaluation system would be a travesty. As mentioned throughout this Report, the basic building blocks needed to establish an acceptable compensation program are simply not in place in the current Statewide Pay Plan. Recommendations based on their structure would only contribute more anxiety producing scenarios to an already overburdened system.

In summary, we are proposing that the State correct the obvious deficiencies as outlined herein. We are proposing the State adopt a unity of purpose between all concerned factions within state government if progress is to be made in an admittedly, difficult arena.

There are numerous variations to the theme offered above. We are convinced that the State of Montana will choose the most prudent course of action, given its moral obligation to its employees and its fiscal responsibilities to its citizens and taxpayers.

State of Montana

Development of Exempt and Nonexempt Pay Systems

Recommended Timetable

July 1990

1) **Retain Pay Plan 90.**

2) **Begin Phase 1 – Development.**
   - Project Planning
   - Employee Communication & Interviews
   - Job Audits/Analysis
   - Class Descriptions
   - Job Evaluation
   - Salary Survey
   - Performance Appraisal
   - Salary Structure Design
   - Selection of Within–in Range Movement

July 1991

1) **Give Pay Increase Based on Grade and Survey Statistics.**

2) **Begin Phase 2 – Trial Implementation**
   - Performance Appraisal

July 1992

1) **Give Pay Increase Based on Policies Developed For Each System**

2) **Begin Phase 3 – Full Implementation**

Figure 6-19

IMPLEMENTATION STRATEGY

State of Montana

Phase 1 – Development

July 1990 – March 1991

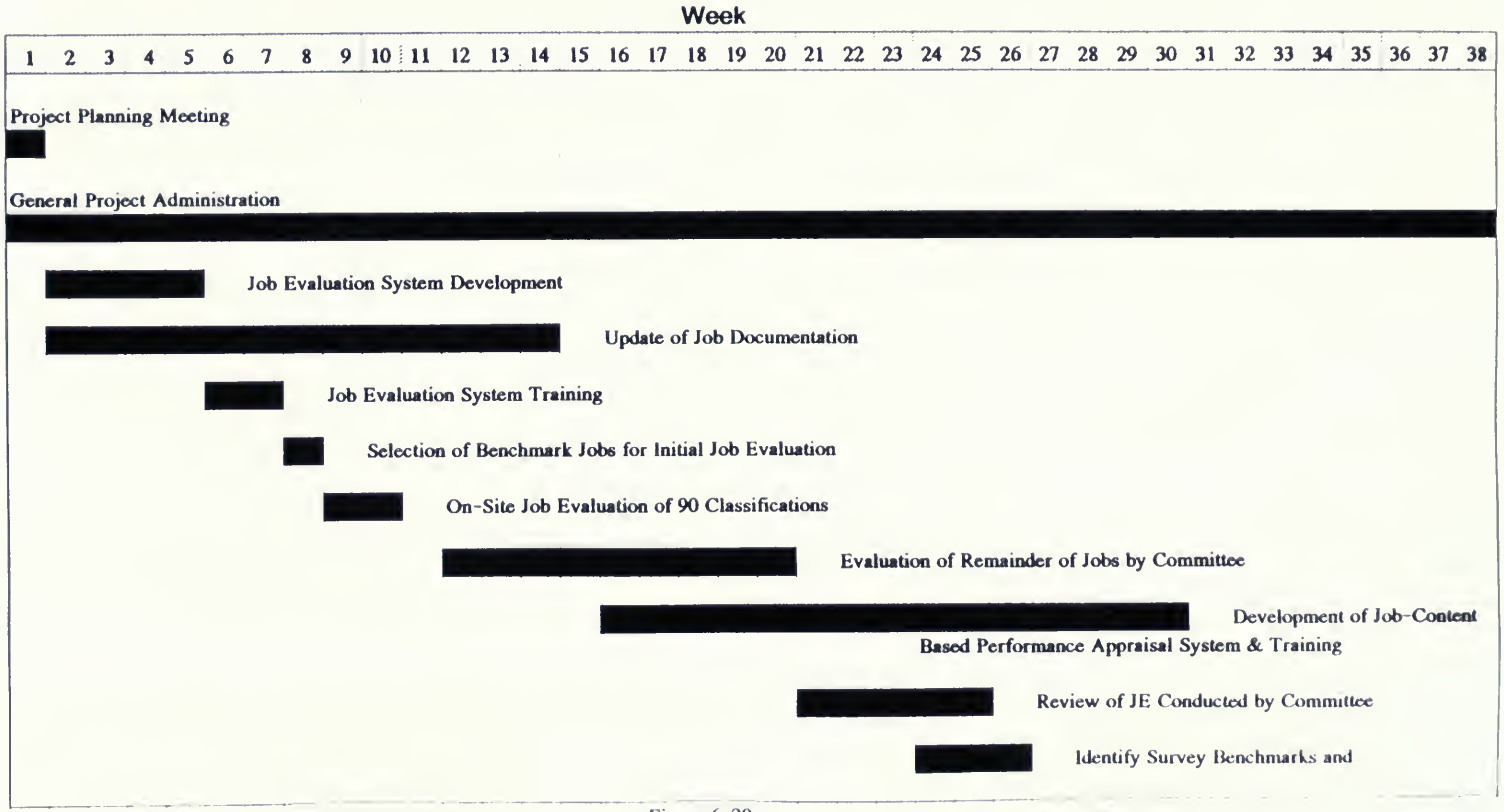

Week
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
Project Planning Meeting
General Project Administration
Job Evaluation System Development
Update of Job Documentation
Job Evaluation System Training
Selection of Benchmark Jobs for Initial Job Evaluation
On-Site Job Evaluation of 90 Classifications
Evaluation of Remainder of Jobs by Committee
Development of Job-Content
Based Performance Appraisal System & Training
Review of JE Conducted by Committee
Identify Survey Benchmarks and

Figure 6-20

Schedule Subject to Revision as Needed.

State of Montana

Phase 1 – Development

July 1990 – March 1991

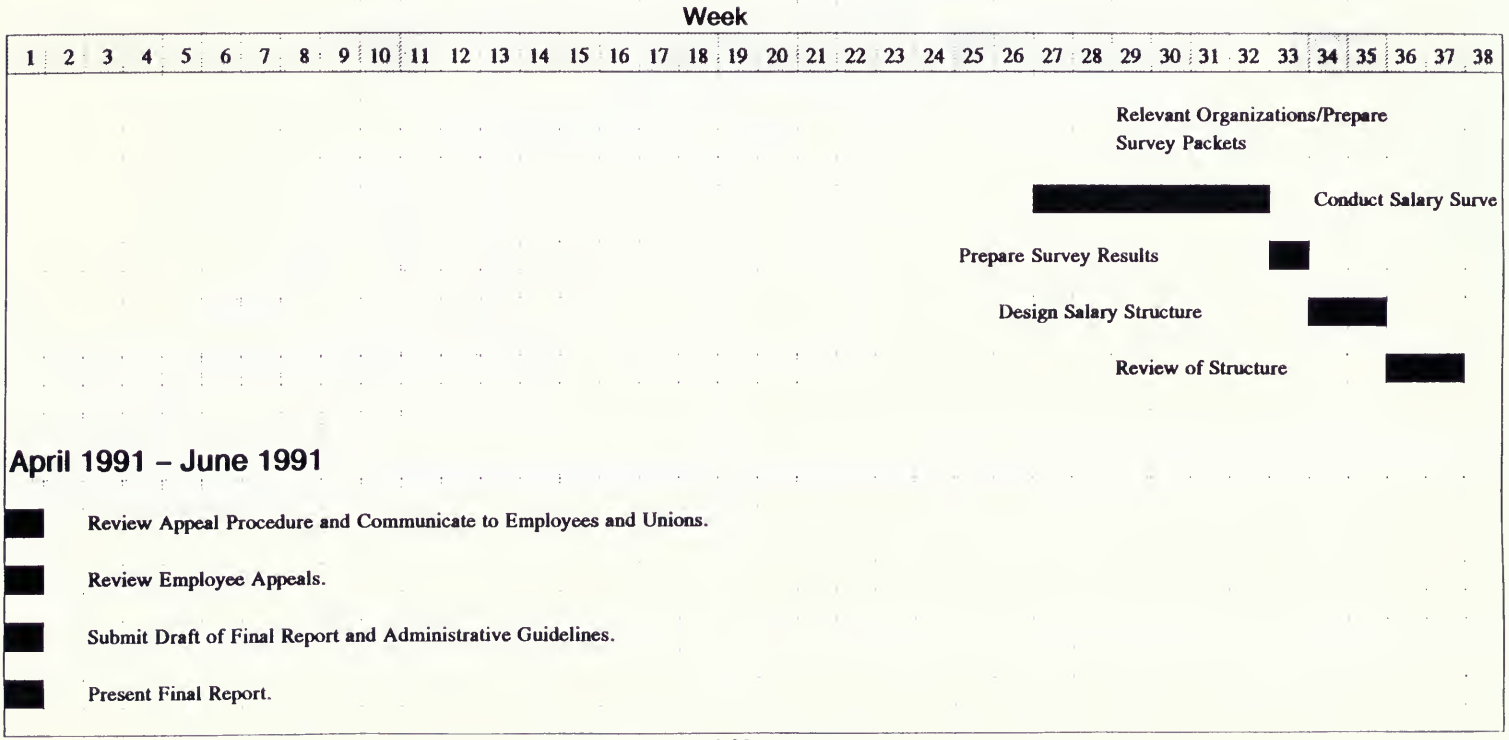

Week
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
Relevant Organizations/Prepare Survey Packets
Conduct Salary Surve
Prepare Survey Results
Design Salary Structure
Review of Structure
April 1991 – June 1991
Review Appeal Procedure and Communicate to Employees and Unions.
Review Employee Appeals.
Submit Draft of Final Report and Administrative Guidelines.
Present Final Report.

Figure 6-20

Schedule Subject to Revision as Needed.

NOTES:

[1] Montana Legislative Council, "State Employee Compensation and Related Issues," Prepared by Lois Menzies, Staff Researcher, October 1989; p. 68.

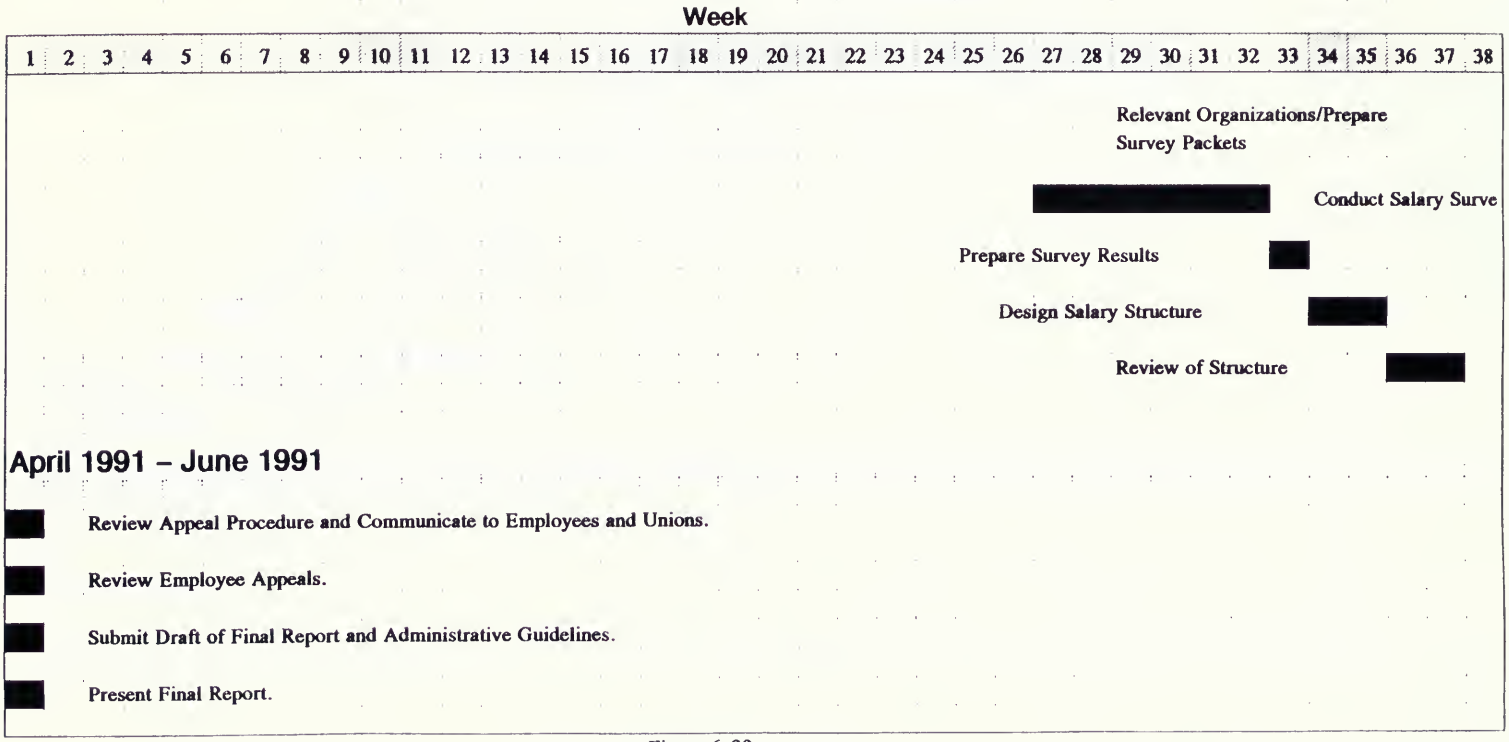
[2] Richard Henderson, Compensation Management, Fifth Edition, Prentice Hall, p. 270.

[3] Ibid, p.264

State of Montana

Phase 1 – Development

July 1990 – March 1991


Week
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
Relevant Organizations/Prepare Survey Packets
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Review Appeal Procedure and Communicate to Employees and Unions.
Review Employee Appeals.
Submit Draft of Final Report and Administrative Guidelines.
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Figure 6-20

NOTES:

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[2] Richard Henderson, Compensation Management, Fifth Edition, Prentice Hall, p. 270.

[3] Ibid, p.264

Appendix A

State of Montana

Salary Survey Results

January 1990

Summary of Compa-Ratios
Combined Totals

Compa-Ratios	Combined Totals
Actual Salaries with Market	81.4%
Midpoint of Montana's Pay Structure with Market	81.2%
Actual Salaries with Midpoint of Montana's Structure	100.3%

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
188053	ADM TREATMENT SER	22	4,006	3,401	3,815	4,228	8	7	74.4%	5,386
188052	ADMIN PROPERTY	21	4,057	3,110	3,530	3,950	8	6	101.7%	3,989
188049	CAREER EXECUTIVE A	21	3,864	3,110	3,530	3,950	11	10	83.4%	4,635
188048	CAREER EXECUTIVE A	20	3,652	2,846	3,269	3,691	7	7	91.6%	3,987
072002	DENTIST I	19	3,093	2,606	3,029	3,453	9	56	65.9%	4,691
073006	DIST VET LVSTK INSP	19	3,112	2,606	3,029	3,453	7	20	97.5%	3,193
188047	CAREER EXECUTIVE A	19	3,383	2,606	3,029	3,453	7	7	81.8%	4,138
187023	SUPERT INST	19	3,153	2,606	3,029	3,453	9	62	96.9%	3,255
005020	CIVIL ENGINEERING M	18	3,360	2,385	2,841	3,295	11	337	83.5%	4,022
188045	ADM GENERAL SRV	18	2,574	2,385	2,841	3,296	8	7	54.9%	4,687
188046	CAREER EXECUTIVE A	18	3,057	2,385	2,841	3,295	11	28	93.4%	3,274
Totals			37,311		34,783		96	547		45,257

Compa–Ratios for Grades 18 – 21

Approximately 238 Full-Time Employees in Grades 18-21 (Excluding University System)

	Totals
Actual Salaries with Market	n = 11
Midpoint of Montana's Pay Structure with Market	82.4%
Actual Salaries with Midpoint of Montana's Structure	76.9%
	107.3%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
040046	RESOURCE PRGRM M	17	2,748	2,185	2,604	3,022	9	150	87.9%	3,126
045117	PSYCHOLOGIST	17	2,558	2,185	2,604	3,022	11	119	75.7%	3,381
075026	NURSING SRVCS MGR	17	3,139	2,185	2,604	3,022	42	177	119.8%	2,621
110003	LAWYER III	17	2,458	2,185	2,604	3,022	16	128	81.4%	3,020
160108	ACCOUNTING/FS MGR	17	2,854	2,185	2,604	3,022	56	183	86.7%	3,292
169014	ADMIN OFFICER V	17	2,718	2,185	2,604	3,022	16	209	79.7%	3,411
169176	DATA PROCSS MGR III	17	2,905	2,185	2,604	3,022	30	115	80.2%	3,621
Totals			19,381		18,228		180	1,081		22,471

Compa-Ratios for Grade 17

	Totals
Approximately 234 Full-Time Employees in Grade 17 (Excluding University System)	n = 7
Actual Salaries with Market	86.2%
Midpoint of Montana's Pay Structure with Market	81.1%
Actual Salaries with Midpoint of Montana's Structure	106.3%

n = Number of Benchmark Jobs

Appendix A

State of Montana

Salary Survey Results

January 1990

Summary of Compa-Ratios

Combined Totals

Compa-Ratios	Combined Totals
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State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
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072002	DENTIST I	19	3,093	2,606	3,029	3,453	9	56	65.9%	4,691
073006	DIST VET LVSTK INSP	19	3,112	2,606	3,029	3,453	7	20	97.5%	3,193
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Totals			37,311		34,783		96	547		45,257

Compa-Ratios for Grades 18 – 21

	Totals
Approximately 238 Full-Time Employees in Grades 18-21 (Excluding University System)	n = 11
Actual Salaries with Market	82.4%
Midpoint of Montana's Pay Structure with Market	76.9%
Actual Salaries with Midpoint of Montana's Structure	107.3%

n = Numb[illegible] of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
040046	RESOURCE PRGRM M	17	2,748	2,185	2,604	3,022	9	150	87.9%	3,126
045117	PSYCHOLOGIST	17	2,558	2,185	2,604	3,022	11	119	75.7%	3,381
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169176	DATA PROCSS MGR III	17	2,905	2,185	2,604	3,022	30	115	80.2%	3,621
Totals			19,381		18,228		180	1,081		22,471

Compa-Ratios for Grade 17	Totals
Approximately 234 Full-Time Employees in Grade 17 (Excluding University System)	n = 7
Actual Salaries with Market	86.2%
Midpoint of Montana's Pay Structure with Market	81.1%
Actual Salaries with Midpoint of Montana's Structure	106.3%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
005018	CIVIL ENGINEERING S	16	2,749	2,004	2,390	2,776	20	601	73.9%	3,719
020057	SOFTWARE SPEC III	16	2,640	2,004	2,390	2,776	16	173	79.4%	3,326
029035	ENVIRONMENTL PRGR	16	2,459	2,004	2,390	2,776	9	146	77.4%	3,176
041061	FISH/W'LIFE REG MGR	16	2,667	2,004	2,390	2,776	11	116	86.1%	3,098
050005	ECONOMIST III	16	2,341	2,004	2,390	2,776	9	33	76.4%	3,066
075013	NURSE EXCEPTION	16	2,564	2,004	2,390	2,776	7	139	90.7%	2,826
099042	EDUCATION PRGRM R	16	2,419	2,004	2,390	2,776	7	301	75.2%	3,218
160018	ACCOUNTANT III	16	2,485	2,004	2,390	2,776	20	46	81.2%	3,061
161008	BUDGET ANALYST EXE	16	2,251	2,004	2,390	2,776	11	95	67.3%	3,346
195066	HUMAN SRVCS MGR I	16	2,567	2,004	2,390	2,776	8	236	101.5%	2,528
199045	PLANNING MGR I	16	2,573	2,004	2,390	2,776	7	29	73.7%	3,490
199072	TELECOM SYS ANLYS	16	2,450	2,004	2,390	2,776	9	17	91.6%	2,674
379009	FISH & GAME WARDEN	16	2,730	2,004	2,390	2,776	10	94	89.0%	3,066
Totals			32,894		31,070		144	2,026		40,593

Compa-Ratios for Grade 16

Approximately 447 Full-Time Employees in Grade 16 (Excluding University Sytem)

	Totals
Actual Salaries with Market	n = 13
Midpoint of Montana's Pay Structure with Market	81.0%
Actual Salaries with Midpoint of Montana's Structure	76.5%
	105.9%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
005017	CIVIL ENGINEERING S	15	2,303	1,838	2,193	2,547	7	17	76.8%	2,998
005054	ENVIRONMENTL ENGI	15	2,268	1,838	2,193	2,547	10	318	70.4%	3,223
012010	PROGRMR/ANALYST III	15	2,334	1,838	2,193	2,547	28	870	80.4%	2,902
029019	FORENSIC SCIENTIST	15	2,187	1,838	2,193	2,547	10	100	67.5%	3,243
040015	FORESTRY PRGRM OF	15	2,423	1,838	2,193	2,547	9	64	86.1%	2,815
075019	NURSE PUB HLTH CNS	15	1,984	1,838	2,193	2,547	7	70	76.7%	2,586
079056	HEALTH SRVCS PRGR	15	2,354	1,838	2,193	2,547	8	125	88.0%	2,675
110002	LAWYER II	15	1,974	1,838	2,193	2,547	23	390	54.8%	3,606
160017	ACCOUNTANT II	15	2,177	1,838	2,193	2,547	18	32	84.7%	2,570
160114	BANK EXAMINER III	15	2,271	1,838	2,193	2,547	11	37	76.7%	2,960
161165	MANAGEMENT ANLYS	15	2,264	1,838	2,193	2,547	11	174	85.7%	2,641
165007	INFORMATION OFFCR	15	2,347	1,838	2,193	2,547	12	184	92.3%	2,542
166064	PERSONNEL OFFCR I	15	2,243	1,838	2,193	2,547	38	118	89.4%	2,510
182005	FIELD PROJECT MGR	15	2,453	1,838	2,193	2,547	5	170	91.8%	2,673
191008	REVIEW APPRAISER	15	2,039	1,838	2,193	2,547	9	34	70.1%	2,909
195115	COMMUNITY SOC WRK	15	2,224	1,838	2,193	2,547	11	578	84.9%	2,619
199009	PLANNER V	15	2,236	1,838	2,193	2,547	13	88	76.1%	2,939
375004	HWY PATROL LIEUTEN	15	2,461	1,838	2,193	2,547	10	192	67.9%	3,626
Totals			40,543		39,474		240	3,561		52,036

Compa-Ratios for Grade 15

	Totals
Approximately 643 Full-Time Employees in Grade 15 (Excluding University System)	n = 18
Actual Salaries with Market	77.9%
Midpoint of Montana's Pay Structure with Market	75.9%
Actual Salaries with Midpoint of Montana's Structure	102.7%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
001006	ARCHITECT II	14	1,793	1,693	2,019	2,344	7	41	58.7%	3,056
005016	CIVIL ENGINEERING S	14	1,945	1,693	2,019	2,344	11	21	71.3%	2,727
005026	DESIGNER III	14	2,168	1,693	2,019	2,344	7	702	74.1%	2,927
024013	HYDROLOGIST	14	1,815	1,693	2,019	2,344	8	72	62.9%	2,886
029023	ENVIRONMENTL SPEC	14	1,901	1,693	2,019	2,344	11	320	73.1%	2,599
041056	FISH/W'LIFE BIOLOGIS	14	2,104	1,693	2,019	2,344	11	259	83.8%	2,510
045014	GUIDANCE COUNSELO	14	1,826	1,693	2,019	2,344	3	10	69.6%	2,625
045040	REHAB COUNSELOR S	14	2,165	1,693	2,019	2,344	10	142	78.5%	2,757
078008	MEDICAL TECHNLGST	14	2,190	1,693	2,019	2,344	25	162	99.1%	2,211
160016	ACCOUNTANT I	14	1,958	1,693	2,019	2,344	24	52	93.8%	2,086
166026	EMPLOYMENT MGR I	14	2,236	1,693	2,019	2,344	12	92	86.3%	2,592
168031	HLTH CARE FCLTY SR	14	1,842	1,693	2,019	2,344	10	182	79.7%	2,311
168098	BUILDING CODES INSP	14	1,934	1,693	2,019	2,344	14	72	86.7%	2,229
169012	ADMIN OFFICER II	14	2,055	1,693	2,019	2,344	26	589	76.5%	2,688
191012	RIGHT/WAY AGENT IV	14	1,589	1,693	2,019	2,344	10	83	54.3%	2,924
195114	SOCIAL WORKER,COM	14	1,872	1,693	2,019	2,344	10	1988	84.6%	2,211
196002	PILOT II	14	2,084	1,693	2,019	2,344	12	105	90.5%	2,302
375014	HWY PAT OFFCR II	14	2,122	1,693	2,019	2,344	10	2575	84.2%	2,520
378006	EMERGENCY MGMT S	14	2,007	1,693	2,019	2,344	11	41	88.7%	2,263
Totals			37,603		38,361		232	7,508		48,423

Compa-Ratios for Grade 14	Totals
Approximately 989 Full-Time Employees in Grade 14 (Excluding University System)	n = 19
Actual Salaries with Market	77.7%
Midpoint of Montana's Pay Structure with Market	79.2%
Actual Salaries with Midpoint of Montana's Structure	98.0%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
005015	CIVIL ENGINEERING S	13	1,659	1,553	1,851	2,148	20	555	65.3%	2,540
012008	PROGRMR/ANALYST I	13	1,618	1,553	1,851	2,148	21	425	69.3%	2,335
018005	ENGINEEERING TECH I	13	1,979	1,553	1,851	2,148	11	871	79.4%	2,492
040013	FORESTER II	13	1,895	1,553	1,851	2,148	10	278	80.4%	2,357
045011	VOCATIONAL REHAB C	13	1,707	1,553	1,851	2,148	10	232	86.3%	1,978
075002	NURSE PROF II	13	1,996	1,553	1,851	2,148	30	819	91.1%	2,191
078007	RADLGCL TECHNLGST	13	1,256	1,553	1,851	2,148	25	70	62.0%	2,026
102002	CURATOR I	13	1,711	1,553	1,851	2,148	10	45	103.4%	1,655
132002	EDITOR II	13	2,117	1,553	1,851	2,148	10	107	89.6%	2,363
160015	ACCOUNTING SPEC III	13	1,854	1,553	1,851	2,148	32	474	67.7%	2,739
166058	PERSONNEL SPEC II	13	1,790	1,553	1,851	2,148	12	201	70.8%	2,529
195017	PROBATION/PAROLE	13	1,787	1,553	1,851	2,148	11	636	82.3%	2,171
199058	RESEARCH SPEC II	13	1,759	1,553	1,851	2,148	7	140	72.2%	2,438
213047	COMPUTER OPER III	13	1,862	1,553	1,851	2,148	7	11	105.8%	1,761
379005	FISH & GAME WARDEN	13	1,604	1,553	1,851	2,148	11	627	67.4%	2,379
431006	FISH HATCHERY SUPV	13	2,049	1,553	1,851	2,148	12	83	86.0%	2,383
823006	COMMUNICATIONS TE	13	1,738	1,553	1,851	2,148	8	136	70.0%	2,483
Totals			30,381		31,467		247	5,710		38,821

Compa-Ratios for Grade 13

	Totals
Approximately 924 Full-Time Employees In Grade 13 (Excluding University Employees)	n = 17
Actual Salaries with Market	78.3%
Midpoint of Montana's Pay Structure with Market	81.1%
Actual Salaries with Midpoint of Montana's Structure	96.6%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
005014	CIVIL ENGINEERING S	12	1,413	1,442	1,718	1,994	6	14	68.2%	2,072
005024	DESIGNER I	12	1,689	1,442	1,718	1,994	9	1034	79.2%	2,132
022013	CHEMIST II	12	1,595	1,442	1,718	1,994	11	98	76.5%	2,086
075001	NURSE PROF I	12	1,633	1,442	1,718	1,994	24	980	74.5%	2,192
079034	MEDICAL RECORDS A	12	1,808	1,442	1,718	1,994	15	15	90.6%	1,996
100024	LIBRARIAN I	12	1,768	1,442	1,718	1,994	26	152	74.8%	2,364
160014	ACCOUNTING SPEC II	12	1,677	1,442	1,718	1,994	27	792	77.1%	2,175
160075	AUDITOR II	12	1,672	1,442	1,718	1,994	11	214	76.2%	2,195
166003	EMPLOYMENT SRVCS	12	1,677	1,442	1,718	1,994	11	1323	85.8%	1,954
169010	ADMIN ASSISTANT IV	12	1,765	1,442	1,718	1,994	9	807	77.4%	2,282
195082	ELIGIBILITY TECH SUP	12	1,803	1,442	1,718	1,994	10	528	81.8%	2,205
241212	UI CLAIMS SPEC 1	12	1,655	1,442	1,718	1,994	9	270	81.4%	2,034
413016	WILDLIFE AREA MGR I	12	1,972	1,442	1,718	1,994	10	131	98.5%	2,002
899005	MAINTENANCE SUPV I	12	1,833	1,442	1,718	1,994	43	52	95.8%	1,913
Totals			23,961		24,052		221	6,410		29,602

Compa-Ratios for Grade 12

	Totals
Approximately 856 Full-Time Employees in Grade 12 (Excluding University System)	n = 14
Actual Salaries with Market	80.9%
Midpoint of Montana's Pay Structure with Market	81.3%
Actual Salaries with Midpoint of Montana's Structure	99.6%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
005023	DESIGN TECHNICIAN II	11	1,522	1,341	1,597	1,853	8	1019	65.8%	2,315
012040	OFFICE SYSTEMS TEC	11	1,470	1,341	1,597	1,853	13	100	69.0%	2,132
018003	ENGINEERING TECH I	11	1,382	1,341	1,597	1,853	20	1333	64.0%	2,159
020015	STATISTICIAN I	11	1,676	1,341	1,597	1,853	11	104	88.6%	1,892
029006	LABORATORY TECH III	11	1,832	1,341	1,597	1,853	8	122	105.9%	1,730
041032	MICROBIOLOGIST I	11	1,507	1,341	1,597	1,853	9	21	83.7%	1,800
160013	ACCOUNTING SPEC I	11	1,604	1,341	1,597	1,853	19	533	88.4%	1,815
168084	DRIVERS SRVCS SPEC	11	1,577	1,341	1,597	1,853	9	598	90.8%	1,736
191010	RIGHT/WAY AGENT II	11	1,563	1,341	1,597	1,853	11	127	67.1%	2,329
195081	ELIGIBILITY TECH II	11	1,588	1,341	1,597	1,853	9	2565	88.8%	1,788
201005	SCRETARY/ADMII	11	1,683	1,341	1,597	1,853	26	1782	98.0%	1,717
213046	COMPUTER OPER II	11	1,331	1,341	1,597	1,853	12	27	88.8%	1,499
Totals			18,736		19,164		155	8,331		22,912

Compa-Ratios for Grade 11	Totals
Approximately 716 Full-Time Employees in Grade 11 (Excluding University System)	n = 12
Actual Salaries with Market	81.8%
Midpoint of Montana's Pay Structure with Market	83.6%
Actual Salaries with Midpoint of Montana's Structure	97.8%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
005014	CIVIL ENGINEERING S	12	1,413	1,442	1,718	1,994	6	14	68.2%	2,072
005024	DESIGNER I	12	1,689	1,442	1,718	1,994	9	1034	79.2%	2,132
022013	CHEMIST II	12	1,595	1,442	1,718	1,994	11	98	76.5%	2,086
075001	NURSE PROF I	12	1,633	1,442	1,718	1,994	24	980	74.5%	2,192
079034	MEDICAL RECORDS A	12	1,808	1,442	1,718	1,994	15	15	90.6%	1,996
100024	LIBRARIAN I	12	1,768	1,442	1,718	1,994	26	152	74.8%	2,364
160014	ACCOUNTING SPEC II	12	1,677	1,442	1,718	1,994	27	792	77.1%	2,175
160075	AUDITOR II	12	1,672	1,442	1,718	1,994	11	214	76.2%	2,195
166003	EMPLOYMENT SRVCS	12	1,677	1,442	1,718	1,994	11	1323	85.8%	1,954
169010	ADMIN ASSISTANT IV	12	1,765	1,442	1,718	1,994	9	807	77.4%	2,282
195082	ELIGIBILITY TECH SUP	12	1,803	1,442	1,718	1,994	10	528	81.8%	2,205
241212	UI CLAIMS SPEC 1	12	1,655	1,442	1,718	1,994	9	270	81.4%	2,034
413016	WILDLIFE AREA MGR I	12	1,972	1,442	1,718	1,994	10	131	98.5%	2,002
899005	MAINTENANCE SUPV I	12	1,833	1,442	1,718	1,994	43	52	95.8%	1,913
Totals			23,961		24,052		221	6,410		29,602

Compa-Ratios for Grade 12

Approximately 856 Full-Time Employees in Grade 12 (Excluding University System)

	Totals
Actual Salaries with Market	n = 14
Midpoint of Montana's Pay Structure with Market	80.9%
Actual Salaries with Midpoint of Montana's Structure	81.3%
	99.6%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
005023	DESIGN TECHNICIAN II	11	1,522	1,341	1,597	1,853	8	1019	65.8%	2,315
012040	OFFICE SYSTEMS TEC	11	1,470	1,341	1,597	1,853	13	100	69.0%	2,132
018003	ENGINEERING TECH I	11	1,382	1,341	1,597	1,853	20	1333	64.0%	2,159
020015	STATISTICIAN I	11	1,676	1,341	1,597	1,853	11	104	88.6%	1,892
029006	LABORATORY TECH III	11	1,832	1,341	1,597	1,853	8	122	105.9%	1,730
041032	MICROBIOLOGIST I	11	1,507	1,341	1,597	1,853	9	21	83.7%	1,800
160013	ACCOUNTING SPEC I	11	1,604	1,341	1,597	1,853	19	533	88.4%	1,815
168084	DRIVERS SRVCS SPEC	11	1,577	1,341	1,597	1,853	9	598	90.8%	1,736
191010	RIGHT/WAY AGENT II	11	1,563	1,341	1,597	1,853	11	127	67.1%	2,329
195081	ELIGIBILITY TECH II	11	1,588	1,341	1,597	1,853	9	2565	88.8%	1,788
201005	SCRETARY/ADMII	11	1,683	1,341	1,597	1,853	26	1782	98.0%	1,717
213046	COMPUTER OPER II	11	1,331	1,341	1,597	1,853	12	27	88.8%	1,499
Totals			18,736		19,164		155	8,331		22,912

Compa-Ratios for Grade 11	Totals
Approximately 716 Full-Time Employees in Grade 11 (Excluding University System)	n = 12
Actual Salaries with Market	81.8%
Midpoint of Montana's Pay Structure with Market	83.6%
Actual Salaries with Midpoint of Montana's Structure	97.8%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
020014	STATISTICAL TECH II	10	1,451	1,249	1,489	1,728	4	47	89.8%	1,615
079002	LPN II	10	1,424	1,249	1,489	1,728	17	133	99.2%	1,436
160004	ACCOUNTING TECH II	10	1,443	1,249	1,489	1,728	36	65	84.3%	1,712
166024	PERSONNEL TECH II	10	1,516	1,249	1,489	1,728	10	369	79.0%	1,918
201004	SECRETARY, ADMIN I	10	1,472	1,249	1,489	1,728	27	93	102.2%	1,441
213054	COMPUTER OPER TEC	10	1,480	1,249	1,489	1,728	12	14	102.3%	1,447
249023	LIBRARY TECH II	10	1,449	1,249	1,489	1,728	24	1182	77.7%	1,865
372011	CORRECT'L OFFCR II	10	1,446	1,249	1,489	1,728	9	2348	77.5%	1,866
413005	BRAND INSPECTOR S	10	1,551	1,249	1,489	1,728	8	29	66.1%	2,346
899003	MAINT WRKR III	10	1,544	1,249	1,489	1,728	29	96	95.9%	1,610
Totals			14,777		14,890		176	4,376		17,256

Compa-Ratios for Grade 10

Approximately 676 Full-Time Employees in Grade 10 (Excluding University System)

	Totals
Actual Salaries with Market	85.6%
Midpoint of Montana's Pay Structure with Market	86.3%
Actual Salaries with Midpoint of Montana's Structure	99.2%
n = Number of Benchmark Jobs	n = 10

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Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
017006	DRAFTER II	9	1,287	1,165	1,390	1,614	25	112	83.8%	1,536
020013	STATISTICAL TECH I	9	1,332	1,165	1,390	1,614	7	101	86.0%	1,548
079001	LPN I	9	1,236	1,165	1,390	1,614	25	230	88.6%	1,395
160003	ACCOUNTING TECH I	9	1,365	1,165	1,390	1,614	37	70	94.2%	1,448
169007	ADMIN ASSISTANT I	9	1,342	1,165	1,390	1,614	8	1324	71.0%	1,889
201003	SECRETARY III	9	1,310	1,165	1,390	1,614	38	154	87.7%	1,493
201009	SECRETARY,LEGAL II	9	1,299	1,165	1,390	1,614	14	26	92.1%	1,411
203019	WORD PROCSS TECH	9	1,325	1,165	1,390	1,614	11	704	81.7%	1,622
213006	DATA ENTRY SUPV II	9	1,466	1,165	1,390	1,614	7	8	75.7%	1,936
215004	PAYROLL TECHNICIAN	9	1,349	1,165	1,390	1,614	57	67	87.6%	1,540
355011	SPECIAL DUTY AIDE I	9	1,350	1,165	1,390	1,614	5	536	104.2%	1,295
382105	CUSTODIAL SUPV I	9	1,444	1,165	1,390	1,614	44	86	100.8%	1,433
922002	WAREHOUSE WORKE	9	1,277	1,165	1,390	1,614	8	25	106.2%	1,202
Totals			17,382		18,070		286	3,443		19,749

Compa-Ratios for Grade 9	Totals
Approximately 802 Full-Time Employees in Grade 9 (Excluding University System)	n = 13
Actual Salaries with Market	88.0%
Midpoint of Montana's Pay Structure with Market	91.5%
Actual Salaries with Midpoint of Montana's Structure	96.2%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
018010	SURVEY AIDE II	8	1,169	1,089	1,299	1,510	7	499	57.8%	2,020
029003	LABORATORY AIDE II	8	1,260	1,089	1,299	1,510	11	79	87.0%	1,449
199051	RESEARCH AIDE II	8	1,129	1,089	1,299	1,510	6	42	71.3%	1,583
201002	SECRETARY II	8	1,230	1,089	1,299	1,510	67	321	98.0%	1,255
205006	EMPLOYMENT ASSIST	8	1,172	1,089	1,299	1,510	8	134	77.8%	1,506
207002	DUPLICATING MACHIN	8	1,206	1,089	1,299	1,510	16	115	77.7%	1,552
207007	WORD PROCSS OPER	8	1,197	1,089	1,299	1,510	11	20	92.1%	1,300
219003	ACCOUNTING CLERK II	8	1,252	1,089	1,299	1,510	51	168	93.2%	1,343
219008	ADMIN CLERK III	8	1,239	1,089	1,299	1,510	26	107	90.1%	1,376
355202	RESIDENT CARE AIDE I	8	1,183	1,089	1,299	1,510	30	4017	87.1%	1,358
359002	COTTAGE LIFE ATTEN	8	1,180	1,089	1,299	1,510	8	612	58.5%	2,016
413001	BRAND INSPECTOR II	8	1,204	1,089	1,299	1,510	8	116	71.0%	1,695
431003	FISH HATCHERY WRK	8	1,211	1,089	1,299	1,510	10	279	65.9%	1837
899001	MAINTENANCE WRKR I	8	1,336	1,089	1,299	1,510	46	106	92.4%	1,446
Totals			16,967		18,186		305	6,615		21,736

Compa-Ratios for Grade 8

	Totals
Approximately 1,240 Full-Time Employees in Grade 8 (Excluding University System)	n = 14
Actual Salaries with Market	78.1%
Midpoint of Montana's Pay Structure with Market	83.7%
Actual Salaries with Midpoint of Montana's Structure	93.3%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
201001	SECRETARY I	7	1,137	1,020	1,218	1,416	50	136	89.1%	1,276
213004	DATA ENTRY OPER III	7	1,136	1,020	1,218	1,416	15	30	88.0%	1,292
219002	ACCOUNTING CLERK II	7	1,226	1,020	1,218	1,416	61	145	97.4%	1,259
219007	ADMIN CLERK II	7	1,155	1,020	1,218	1,416	34	234	84.4%	1,369
315001	COOK I	7	1,119	1,020	1,218	1,416	46	126	105.3%	1,063
354001	HOME ATTENDANT	7	1,294	1,020	1,218	1,416	8	747	121.0%	1,070
355201	RESIDENT CARE AIDE I	7	1,126	1,020	1,218	1,416	9	1446	107.4%	1,049
441004	FORESTRY WORKER II	7	1,360	1,020	1,218	1,416	7	146	73.0%	1,864
Totals			9,554		9,744		230	3,010		10,240

Compa-Ratios for Grade 7

	Totals
Approximately 677 Full-Time Employees in Grade 7 (Excluding University System)	n = 8
Actual Salaries with Market	93.3%
Midpoint of Montana's Pay Structure with Market	95.2%
Actual Salaries with Midpoint of Montana's Structure	98.0%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
219006	ADMIN CLERK I	6	1,027	956	1,142	1,329	40	346	88.9%	1,155
231002	MAIL CLERK II	6	1,068	956	1,142	1,329	8	12	108.8%	982
361002	LAUNDRY WORKER I	6	1,072	956	1,142	1,329	31	143	116.1%	923
372002	SECURITY GUARD I	6	1,039	956	1,142	1,329	11	894	68.7%	1,513
382101	CUSTODIAN I	6	1,077	956	1,142	1,329	79	543	99.7%	1,081
899016	LABORER II	6	1,073	956	1,142	1,329	8	28	72.1%	1,487
979001	MICROFILM CLERK I	6	1,119	956	1,142	1,329	10	100	96.9%	1,155
Totals			7,476		7,994		187	2,066		8,296

Compa-Ratios for Grade 6

	Totals
Approximately 356 Full-Time Employees in Grade 6 (Excluding University System)	n = 6
Actual Salaries with Market	90.1%
Midpoint of Montana's Pay Structure with Market	96.4%
Actual Salaries with Midpoint of Montana's Structure	93.5%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana's Pay Structure Range Min	Range Midpoint	Range Max	Survey Results Combined Totals All Participants Participants # of Org	# of Empl	Compa Actual/ Market	Survey Weighted Salary
213002	DATA ENTRY OPER I	5	999	898	1,075	1,250	11	36	83.5%	1,196
219005	OFFICE CLERK II	5	963	898	1,075	1,250	21	106	84.0%	1,147
249005	LIBRARY CLERK I	5	947	898	1,075	1,250	13	217	61.8%	1,531
311001	FOOD SRVCS WRKR I	5	955	898	1,075	1,250	43	352	106.6%	896
353002	TOUR GUIDE I	5	938	898	1,075	1,250	3	5	111.3%	842
219004	OFFICE CLERK I	4	901	845	1,012	1,178	15	63	88.8%	1,015
Totals			5,704		6,387		106	779		6,628

Compa-Ratios for Grades 5 – 4

	Totals
Approximately 203 Full-Time Employees in Grades 5-4 (Excluding University System)	n = 6
Actual Salaries with Market	86.1%
Midpoint of Montana's Pay Structure with Market	96.4%
Actual Salaries with Midpoint of Montana's Structure	89.3%

n = Number of Benchmark Jobs

Appendix B

State of Montana

Salary Survey Results

January 1990

Summary of Compa-Ratios

Intra/Inter State Comparison

Compa-Ratios	12 State Govts.	Employers Within MT
Actual Salaries with Market	79.1%	90.7%
Midpoint of Montana's Pay Structure with Market	78.1%	92.2%
Actual Salaries with Midpoint of Montana's Structure	101.3%	98.4%

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
188053	ADM TREATMENT SER	22	4,006	3,815	8	7	74.4%	5,386				
188052	ADMIN PROPERTY	21	4,057	3,530	8	6	101.7%	3,989				
188049	CAREER EXECUTIVE A	21	3,864	3,530	11	10	83.4%	4,635				
188048	CAREER EXECUTIVE A	20	3,652	3,269	7	7	91.6%	3,987				
072002	DENTIST I	19	3,093	3,029	9	56	65.9%	4,691				
073006	DIST VET LVSTK INSP	19	3,112	3,029	7	20	97.5%	3,193				
188047	CAREER EXECUTIVE A	19	3,383	3,029	7	7	81.8%	4,138				
187023	SUPERT INST	19	3,153	3,029	9	62	96.9%	3,255				
005020	CIVIL ENGINEERING M	18	3,360	2,841	11	337	83.5%	4,022				
188045	ADM GENERAL SRV	18	2,574	2,841	8	7	54.9%	4,687				
188046	CAREER EXECUTIVE A	18	3,057	2,841	11	28	93.4%	3,274				
Totals			37,311	34,783	96	547		45,257				

Compa-Ratios for Grades 18 – 21	States	MT
Approximately 238 Full-Time Employees in Grades 18-21 (Excluding University System)	n = 11	n = 0
Actual Salaries with Market	82.4%	
Midpoint of Montana's Pay Structure with Market	76.9%	
Actual Salaries with Midpoint of Montana's Structure	107.3%	

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
040046	RESOURCE PRGRM M	17	2,748	2,604	9	150	87.9%	3,126				
045117	PSYCHOLOGIST	17	2,558	2,604	11	119	75.7%	3,381				
075026	NURSING SRVCS MGR	17	3,139	2,604	11	99	114.7%	2,737	31	78	126.9%	2473
110003	LAWYER III	17	2,458	2,604	7	117	80.5%	3,054	9	11	92.3%	2664
160108	ACCOUNTING/FS MGR	17	2,854	2,604	12	136	83.4%	3,421	44	47	97.8%	2918
169014	ADMIN OFFICER V	17	2,718	2,604	5	173	74.5%	3,648	11	36	119.5%	2275
169176	DATA PROCSS MGR III	17	2,905	2,604	12	82	72.2%	4,026	18	33	111.2%	2613
Totals			19,381	18,228	67	876		23,393	113	205		12,943

Compa-Ratios for Grade 17	States	MT
Approximately 234 Full-Time Employees in Grade 17 (Excluding University System)	n = 7	n = 5
Actual Salaries with Market	82.8%	108.7%
Midpoint of Montana's Pay Structure with Market	77.9%	100.6%
Actual Salaries with Midpoint of Montana's Structure	106.3%	108.1%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
005018	CIVIL ENGINEERING S	16	2,749	2,390	11	570	73.9%	3,719	9	31	73.8%	3725
020057	SOFTWARE SPEC III	16	2,640	2,390	11	161	78.2%	3,374	5	12	98.4%	2683
029035	ENVIRONMENTL PRGR	16	2,459	2,390	9	146	77.4%	3,176				
041061	FISH/W'LIFE REG MGR	16	2,667	2,390	11	116	86.1%	3,098				
050005	ECONOMIST III	16	2,341	2,390	9	33	76.4%	3,066				
075013	NURSE EXCEPTION	16	2,564	2,390	7	139	90.7%	2,826				
099042	EDUCATION PRGRM R	16	2,419	2,390	7	301	75.2%	3,218				
160018	ACCOUNTANT III	16	2,485	2,390					20	46	81.2%	3061
161008	BUDGET ANALYST EXE	16	2,251	2,390	11	95	67.3%	3,346				
195066	HUMAN SRVCS MGR I	16	2,567	2,390	8	236	101.5%	2,528				
199045	PLANNING MGR I	16	2,573	2,390	7	29	73.7%	3,490				
199072	TELECOM SYS ANLYS	16	2,450	2,390	9	17	91.6%	2,674				
379009	FISH & GAME WARDEN	16	2,730	2,390	10	94	89.0%	3,066				
Totals			32,894	31,070	110	1,937		37,581	34	89		9,469

Compa-Ratios for Grade 16	States	MT
Approximately 447 Full-Time Employees in Grade 16 (Excluding University Sytem)	n = 12	n = 3
Actual Salaries with Market	80.9%	83.1%
Midpoint of Montana's Pay Structure with Market	76.3%	75.7%
Actual Salaries with Midpoint of Montana's Structure	106.0%	109.8%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
005017	CIVIL ENGINEERING S	15	2,303	2,193					7	17	76.8%	2998
005054	ENVIRONMENTL ENGI	15	2,268	2,193	10	318	70.4%	3,223				
012010	PROGRMR/ANALYST III	15	2,334	2,193	11	835	79.8%	2,925	17	35	98.5%	2369
029019	FORENSIC SCIENTIST	15	2,187	2,193	10	100	67.5%	3,243				
040015	FORESTRY PRGRM OF	15	2,423	2,193	9	64	86.1%	2,815				
075019	NURSE PUB HLTH CNS	15	1,984	2,193	7	70	76.7%	2,586				
079056	HEALTH SRVCS PRGR	15	2,354	2,193	8	125	88.0%	2,675				
110002	LAWYER II	15	1,974	2,193	11	366	53.5%	3,691	12	24	85.7%	2303
160017	ACCOUNTANT II	15	2,177	2,193					18	32	84.7%	2570
160114	BANK EXAMINER III	15	2,271	2,193	11	37	76.7%	2,960				
161165	MANAGEMENT ANLYS	15	2,264	2,193	11	174	85.7%	2,641				
165007	INFORMATION OFFCR	15	2,347	2,193	12	184	92.3%	2,542				
166064	PERSONNEL OFFCR I	15	2,243	2,193	12	89	86.7%	2,588	26	29	98.8%	2269
182005	FIELD PROJECT MGR	15	2,453	2,193	5	170	91.8%	2,673				
191008	REVIEW APPRAISER	15	2,039	2,193	9	34	70.1%	2,909				
195115	COMMUNITY SOC WRK	15	2,224	2,193	11	578	84.9%	2,619				
199009	PLANNER V	15	2,236	2,193	7	81	74.3%	3,010	6	7	105.5%	2119
375004	HWY PATROL LIEUTEN	15	2,461	2,193	10	192	67.9%	3,626				
Totals			40,543	39,474	154	3,417		46,726	86	144		14,628

Compa-Ratios for Grade 15	States	MT
Approximately 643 Full-Time Employees in Grade 15 (Excluding University System)	n = 16	n = 6
Actual Salaries with Market	77.2%	90.7%
Midpoint of Montana's Pay Structure with Market	75.1%	90.0%
Actual Salaries with Midpoint of Montana's Structure	102.8%	100.8%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
001006	ARCHITECT II	14	1,793	2,019	7	41	58.7%	3,056				
005016	CIVIL ENGINEERING S	14	1,945	2,019					11	21	71.3%	2727
005026	DESIGNER III	14	2,168	2,019	7	702	74.1%	2,927				
024013	HYDROLOGIST	14	1,815	2,019	8	72	62.9%	2,886				
029023	ENVIRONMENTL SPEC	14	1,901	2,019	11	320	73.1%	2,599				
041056	FISH/W'LIFE BIOLOGIS	14	2,104	2,019	11	259	83.8%	2,510				
045014	GUIDANCE COUNSELO	14	1,826	2,019					3	10	69.6%	2625
045040	REHAB COUNSELOR S	14	2,165	2,019	10	142	78.5%	2,760				
078008	MEDICAL TECHNLGST	14	2,190	2,019	11	101	97.1%	2,255	14	61	102.5%	2137
160016	ACCOUNTANT I	14	1,958	2,019					24	52	93.8%	2086
166026	EMPLOYMENT MGR I	14	2,236	2,019	12	92	86.3%	2,592				
168031	HLTH CARE FCLTY SR	14	1,842	2,019	10	182	79.7%	2,311				
168098	BUILDING CODES INSP	14	1,934	2,019	8	60	84.1%	2,299	6	12	102.8%	1881
169012	ADMIN OFFICER II	14	2,055	2,019	7	558	75.6%	2,717	19	31	94.8%	2167
191012	RIGHT/WAY AGENT IV	14	1,589	2,019	10	83	54.3%	2,924				
195114	SOCIAL WORKER,COM	14	1,872	2,019	10	1988	84.6%	2,211				
196002	PILOT II	14	2,084	2,019	11	35	77.0%	2,705	1	70	99.2%	2100
375014	HWY PAT OFFCR II	14	2,122	2,019	10	2575	84.2%	2,520				
378006	EMERGENCY MGMT S	14	2,007	2,019	11	41	88.7%	2,263				
Totals			37,603	38,361	154	7,251		41,535	78	257		15,723

Compa-Ratios for Grade 14	States	MT
Approximately 989 Full-Time Employees in Grade 14 (Excluding University System)	n = 16	n = 7
Actual Salaries with Market	76.7%	89.0%
Midpoint of M[illegible]na's Pay Structure with Market	77.8%	89.9%
Actual Salari[illegible]ith Midpoint of Montana's Structure	.7%	99.0%

n = Number [illegible]enchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
005015	CIVIL ENGINEERING S	13	1,659	1,851	11	534	65.4%	2,537	9	21	63.3%	2622
012008	PROGRMR/ANALYST I	13	1,618	1,851	11	411	68.7%	2,354	10	14	90.5%	1787
018005	ENGINEEERING TECH I	13	1,979	1,851	11	871	79.4%	2,492				
040013	FORESTER II	13	1,895	1,851	10	278	80.4%	2,357				
045011	VOCATIONAL REHAB C	13	1,707	1,851	10	232	86.3%	1,978				
075002	NURSE PROF II	13	1,996	1,851	10	399	88.6%	2,252	20	420	93.6%	2133
078007	RADLGCL TECHNLGST	13	1,256	1,851	9	24	54.4%	2,308	16	46	66.8%	1879
102002	CURATOR I	13	1,711	1,851	10	45	103.4%	1,655				
132002	EDITOR II	13	2,117	1,851	10	107	89.6%	2,363				
160015	ACCOUNTING SPEC III	13	1,854	1,851	12	443	66.6%	2,783	20	31	87.9%	2110
166058	PERSONNEL SPEC II	13	1,790	1,851	12	201	70.8%	2,529				
195017	PROBATION/PAROLE	13	1,787	1,851	11	636	82.3%	2,171				
199058	RESEARCH SPEC II	13	1,759	1,851	7	140	72.1%	2,438				
213047	COMPUTER OPER III	13	1,862	1,851					7	11	105.7%	1761
379005	FISH & GAME WARDEN	13	1,604	1,851	11	627	67.4%	2,379				
431006	FISH HATCHERY SUPV	13	2,049	1,851	12	83	86.0%	2,383				
823006	COMMUNICATIONS TE	13	1,738	1,851	8	136	70.0%	2,483				
Totals			30,381	31,467	165	5,167		37,462	82	543		12,292

Compa-Ratios for Grade 13	States	MT
Approximately 924 Full-Time Employees in Grade 13 (Excluding University Employees)	n = 16	n = 6
Actual Salaries with Market	76.1%	83.3%
Midpoint of Montana's Pay Structure with Market	79.1%	90.4%
Actual Salaries with Midpoint of Montana's Structure	96.3%	92.2%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
005014	CIVIL ENGINEERING S	12	1,413	1,718					6	14	68.2%	2072
005024	DESIGNER I	12	1,689	1,718	8	1032	79.2%	2,132	1	2	87.8%	1923
022013	CHEMIST II	12	1,595	1,718	11	98	76.5%	2,086				
075001	NURSE PROF I	12	1,633	1,718					24	980	74.5%	2192
079034	MEDICAL RECORDS A	12	1,808	1,718					15	15	90.6%	1996
100024	LIBRARIAN I	12	1,768	1,718	11	119	71.4%	2,475	15	33	92.1%	1919
160014	ACCOUNTING SPEC II	12	1,677	1,718	11	763	76.8%	2,182	16	29	83.9%	1999
160075	AUDITOR II	12	1,672	1,718	11	214	76.2%	2,195				
166003	EMPLOYMENT SRVCS	12	1,677	1,718	11	1323	85.8%	1,954				
169010	ADMIN ASSISTANT IV	12	1,765	1,718	9	807	77.4%	2,282				
195082	ELIGIBILITY TECH SUP	12	1,803	1,718	10	528	81.8%	2,205				
241212	UI CLAIMS SPEC 1	12	1,655	1,718	9	270	81.4%	2,034				
413016	WILDLIFE AREA MGR I	12	1,972	1,718	10	131	98.5%	2,002				
899005	MAINTENANCE SUPV I	12	1,833	1,718					43	52	95.8%	1913
Totals			23,961	24,052	101	5,285		21,547	120	1,125		14,014

Compa-Ratios for Grade 12

Approximately 856 Full-Time Employees in Grade 12 (Excluding University System)

	States	MT
	n = 10	n = 7
Actual Salaries with Market	80.2%	84.4%
Midpoint of Montana's Pay Structure with Market	79.7%	85.8%
Actual Salaries with Midpoint of Montana's Structure	100.5%	98.3%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees Actual Average	Montana Employees Range Midpoint	Survey Results 12 State Governments Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
005023	DESIGN TECHNICIAN II	11	1,522	1,597	8	1019	65.8%	2,315				
012040	OFFICE SYSTEMS TEC	11	1,470	1,597	7	94	68.2%	2,155	6	6	83.0%	1771
018003	ENGINEERING TECH I	11	1,382	1,597	10	1302	63.6%	2,174	10	31	89.9%	1537
020015	STATISTICIAN I	11	1,676	1,597	11	104	88.6%	1,892				
029006	LABORATORY TECH III	11	1,832	1,597	8	122	105.9%	1,730				
041032	MICROBIOLOGIST I	11	1,507	1,597	9	21	83.7%	1,800				
160013	ACCOUNTING SPEC I	11	1,604	1,597	12	513	88.4%	1,815	7	20	89.0%	1802
168084	DRIVERS SRVCS SPEC	11	1,577	1,597	9	598	90.8%	1,736				
191010	RIGHT/WAY AGENT II	11	1,563	1,597	11	127	67.1%	2,329				
195081	ELIGIBILITY TECH II	11	1,588	1,597	9	2565	88.8%	1,788				
201005	SCRETARY/ADMII	11	1,683	1,597					26	1782	98.0%	1,717
213046	COMPUTER OPER II	11	1,331	1,597					12	27	88.8%	1499
Totals			18,736	19,164	94	6,465		19,734	61	1,866		8,326

Compa-Ratios for Grade 11	States	MT
Approximately 716 Full-Time Employees in Grade 11 (Excluding University System)	n = 10	n = 5
Actual Salaries with Market	79.7%	89.7%
Midpoint of Montana's Pay Structure with Market	80.9%	95.9%
Actual Salaries with Midpoint of Montana's Structure	98.4%	93.5%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
020014	STATISTICAL TECH II	10	1,451	1,489	4	47	89.8%	1,615				
079002	LPN II	10	1,424	1,489					17	133	99.2%	1436
160004	ACCOUNTING TECH II	10	1,443	1,489					36	65	84.3%	1712
166024	PERSONNEL TECH II	10	1,516	1,489	10	369	79.0%	1,918				
201004	SECRETARY, ADMIN I	10	1,472	1,489					27	93	102.2%	1441
213054	COMPUTER OPER TEC	10	1,480	1,489					12	14	102.3%	1447
249023	LIBRARY TECH II	10	1,449	1,489	10	1130	76.1%	1,903	14	52	140.8%	1029
372011	CORRECT'L OFFCR II	10	1,446	1,489	9	2348	77.5%	1,866				
413005	BRAND INSPECTOR S	10	1,551	1,489	8	29	66.1%	2,346				
899003	MAINT WRKR III	10	1,544	1,489					29	96	95.9%	1610
Totals			14,777	14,890	41	3,923		9,648	135	453		8,675

Compa-Ratios for Grade 10	States	MT
Approximately 676 Full-Time Employees in Grade 10 (Excluding University System)	n = 5	n = 6
Actual Salaries with Market	76.8%	101.6%
Midpoint of Montana's Pay Structure with Market	77.2%	103.0%
Actual Salaries with Midpoint of Montana's Structure	99.6%	98.6%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
017006	DRAFTER II	9	1,287	1,390	7	91	85.1%	1,512	18	21	78.5%	1638
020013	STATISTICAL TECH I	9	1,332	1,390	7	101	86.0%	1,548				
079001	LPN I	9	1,236	1,390					25	230	88.6%	1395
160003	ACCOUNTING TECH I	9	1,365	1,390					37	70	94.2%	1448
169007	ADMIN ASSISTANT I	9	1,342	1,390	8	1324	71.1%	1,889				
201003	SECRETARY III	9	1,310	1,390					38	154	87.7%	1493
201009	SECRETARY,LEGAL II	9	1,299	1,390					14	26	92.0%	1411
203019	WORD PROCSS TECH	9	1,325	1,390	11	704	81.7%	1,622				
213006	DATA ENTRY SUPV II	9	1,466	1,390					7	8	75.7%	1936
215004	PAYROLL TECHNICIAN	9	1,349	1,390					57	67	87.6%	1540
355011	SPECIAL DUTY AIDE I	9	1,350	1,390	5	536	104.2%	1,295				
382105	CUSTODIAL SUPV I	9	1,444	1,390					44	86	49.8%	2903
922002	WAREHOUSE WORKE	9	1,277	1,390					8	25	106.2%	1202
Totals			17,382	18,070	38	2,756		7,866	248	687		14,966

Compa-Ratios for Grade 9	States	MT
Approximately 802 Full-Time Employees in Grade 9 (Excluding University System)	n = 5	n = 9
Actual Salaries with Market	84.4%	80.4%
Midpoint of Montana's Pay Structure with Market	88.4%	83.6%
Actual Salaries with Midpoint of Montana's Structure	95.5%	96.2%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
018010	SURVEY AIDE II	8	1,169	1,299	7	499	57.8%	2,020				
029003	LABORATORY AIDE II	8	1,260	1,299	11	79	87.0%	1,449				
199051	RESEARCH AIDE II	8	1,129	1,299	6	42	71.3%	1,583				
201002	SECRETARY II	8	1,230	1,299					67	321	98.0%	1255
205006	EMPLOYMENT ASSIST	8	1,172	1,299	8	134	77.8%	1,506				
207002	DUPLICATING MACHIN	8	1,206	1,299	10	109	77.0%	1,566	6	6	93.3%	1293
207007	WORD PROCSS OPER	8	1,197	1,299					11	20	92.1%	1300
219003	ACCOUNTING CLERK II	8	1,252	1,299					51	168	93.2%	1343
219008	ADMIN CLERK III	8	1,239	1,299					26	107	90.0%	1376
355202	RESIDENT CARE AIDE I	8	1,183	1,299	10	2952	75.8%	1,561	20	1065	148.8%	795
359002	COTTAGE LIFE ATTEN	8	1,180	1,299	8	612	58.5%	2,016				
413001	BRAND INSPECTOR II	8	1,204	1,299	8	116	71.0%	1,695				
431003	FISH HATCHERY WRK	8	1,211	1,299	10	279	65.9%	1837				
899001	MAINTENANCE WRKR I	8	1,336	1,299					46	106	92.4%	1446
Totals			16,967	18,186	78	4,822		15,233	227	1,793		8,808

Compa-Ratios for Grade 8	States	MT
Approximately 1,240 Full-Time Employees in Grade 8 (Excluding University System)	n = 9	n = 7
Actual Salaries with Market	70.3%	98.1%
Midpoint of Montana's Pay Structure with Market	76.7%	103.2%
Actual Salaries with Midpoint of Montana's Structure	91.6%	95.1%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
201001	SECRETARY I	7	1,137	1,218					50	136	89.1%	1276
213004	DATA ENTRY OPER III	7	1,136	1,218					15	30	87.9%	1292
219002	ACCOUNTING CLERK II	7	1,226	1,218					61	145	106.3%	1259
219007	ADMIN CLERK II	7	1,155	1,218					34	234	84.3%	1369
315001	COOK I	7	1,119	1,218					46	126	105.3%	1063
354001	HOME ATTENDANT	7	1,294	1,218	8	747	120.9%	1,070				
355201	RESIDENT CARE AIDE I	7	1,126	1,218	9	1446	107.4%	1,049				
441004	FORESTRY WORKER II	7	1,360	1,218	7	146	73.0%	1,864				
Totals			9,554	9,744	24	2,339		3,983	206	671		6,259

Compa-Ratios for Grade 7

	States	MT
Approximately 677 Full-Time Employees in Grade 7 (Excluding University System)	n = 3	n = 5
Actual Salaries with Market	94.9%	94.0%
Midpoint of Montana's Pay Structure with Market	91.7%	97.3%
Actual Salaries with Midpoint of Montana's Structure	103.5%	96.6%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
219006	ADMIN CLERK I	6	1,027	1,142					40	346	88.9%	1155
231002	MAIL CLERK II	6	1,068	1,142					8	12	108.7%	982
361002	LAUNDRY WORKER I	6	1,072	1,142					31	143	116.2%	923
372002	SECURITY GUARD I	6	1,039	1,142	11	894	68.7%	1,513				
382101	CUSTODIAN I	6	1,077	1,142					79	543	99.7%	1081
899016	LABORER II	6	1,073	1,142					8	28	72.1%	1487
979001	MICROFILM CLERK I	6	1,119	1,142	10	100	96.9%	1,155				
Totals			7,476	7,994	21	994		2,668	166	1,072		5,628

Compa-Ratios for Grade 6	States	MT
Approximately 356 Full-Time Employees in Grade 6 (Excluding University System)	n = 2	n = 5
Actual Salaries with Market	80.9%	94.5%
Midpoint of Montana's Pay Structure with Market	85.6%	101.5%
Actual Salaries with Midpoint of Montana's Structure	94.5%	93.1%

n = Number of Benchmark Jobs

State of Montana

Salary Survey Results

January 1990

Class Number	Class Title	Grade	Montana Employees: Actual Average	Montana Employees: Range Midpoint	Survey Results 12 State Governments: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary	Survey Results Employers Within-MT: Participants # of Org	Participants # of Empl	Compa Actual/ Market	Survey Weighted Salary
213002	DATA ENTRY OPER I	5	999	1,075					11	36	83.6%	1196
219005	OFFICE CLERK II	5	963	1,075					21	106	84.0%	1147
249005	LIBRARY CLERK I	5	947	1,075	5	185	57.6%	1,645	8	32	108.0%	877
311001	FOOD SRVCS WRKR I	5	955	1,075					43	352	106.6%	896
353002	TOUR GUIDE I	5	938	1,075	3	5	111.4%	842				
219004	OFFICE CLERK I	4	901	1,012					15	63	88.8%	1015
Totals			5,704	6,387	8	190		2,487	98	589		5,131

Compa-Ratios for Grades 5 – 4

Approximately 203 Full-Time Employees in Grades 5-4 (Excluding University System)

	States	MT
	n = 2	n = 5
Actual Salaries with Market	75.8%	92.9%
Midpoint of Montana's Pay Structure with Market	86.4%	103.5%
Actual Salaries with Midpoint of Montana's Structure	87.7%	89.7%

n = Number of Benchmark Jobs

Appendix C

SAMPLE

Performance Appraisal Manual

Secretarial and Clerical

MANAGEMENT REVIEW DRAFT

MAY 1990

The Waters Consulting Group, Inc.
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SECRETARIAL AND CLERICAL

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22.	Phone Answering	_____	5
23.	Planning and Scheduling	_____	5
24.	Transcription	_____	5
25.	Typing Skills	_____	5

SECRETARIAL AND CLERICAL

DIMENSION I - WORK STANDARDS

1. **Accountability**

   Demonstrates responsibility for actions and outcome of work tasks and projects within the employee's scope of job duties. Explains and justifies actions taken.

2. **Attendance**

   Reports to work as scheduled and on time, takes only approved breaks and lunch periods, and schedules vacation and necessary time off in accordance with departmental/personnel policy.

3. **Decision Making**

   Thinks logically, reasons clearly and arrives at sound decisions. Effectively uses data and facts in making decisions.

4. **Dealing with Stress and Performance Under Pressure**

   Behaves in a rational, calm and patient manner in stressful situations. Works effectively under pressure conditions, such as heavy workloads or deadline situations; productivity remains consistent with given conditions; errors do not become more frequent.

5. **Initiative**

   Demonstrates initiative in performance of the job. Possesses problem-solving capabilities. Suggests ways to improve efficiency or productivity of unit.

6. **Job Knowledge**

   Possesses and applies the necessary common and technical knowledge including operation, maintenance, and/or repairs of all equipment, required for the position. Demonstrates knowledge in the operation, maintenance, and/or repair of all equipment used on the job.

7. **Knowledge of Administrative Systems and Processes**

   Demonstrates clerical/administrative skills in processing financial, budgeting and personnel transactions such as requisition, purchase orders, work orders, account maintenance, budget documents, personnel forms, leave records, etc.

8. **Listening Skills**

   Listens and understands information that is being conveyed.

9. **Managing Goals and Objectives**

Organizes work to use time effectively and efficiently. Completes work assignments within established deadlines. Follows work instructions and directives. Informs appropriate person when problems or unusual situations arise.

10. **Oral Communication**

Demonstrates effective oral communication skills and conveys ideas and information in a manner that is clear and concise.

11. **Policies and Procedures**

Follows organization and departmental policies, procedures and regulations consistent with established guidelines.

12. **Written Communication**

Demonstrates effective written communication skills; clearly conveys ideas and information in a written format.

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DIMENSION II - INTERACTIONS

13. **Interactions with Co-Workers**

Works willingly and agreeably with co-workers in order accomplish effectively and efficiently; helps create and maintain good working relationships; provides assistance and backup.

14. **Interactions with Other Units**

Works willingly and agreeably with other units to accomplish the goals of the organization.

15. **Interactions with the Public**

Creates a positive and professional impression in dealing with the public.

16. **Interactions with Supervisors**

Works willingly and agreeably with supervisors in support of unit goals and objectives.

17. **Work Guidance/Training**

Provides work guidance and training of co-workers when appropriate.

SECRETARIAL AND CLERICAL

DIMENSION III - WORK ACTIVITIES

18. **Computation/Research Report Skills**

Accurately calculates in financial or other applications in research activities. Prepares written reports that are comprehensive, well organized, clearly written, complete, and submitted in a timely manner.

19. **Editing**

Correctly proofreads and edits materials for mistakes in punctuation, spelling, proper English usage, etc.

20. **File Maintenance**

Develops and maintains accurate and up-to-date files and recordkeeping systems.

21. **Knowledge of Data Program/Input**

Accurately inputs and deletes data on data terminal and retrieves computer information; and exhibits knowledge in the use of data programs.

22. **Phone Answering**

Answers phone politely and promptly in a professional manner. Takes messages accurately and completely.

23. **Planning and Scheduling**

Effectively plans and schedules work activities; arranges and relates workload and resources to meet desired results. Allows for flexibility in work activities to meet changing needs for unexpected situations and anticipating variations in workflow by planning accordingly. Fills in for other during heavy workloads or absences when necessary.

24. **Transcription**

Turns dictation into accurate typed copy using either shorthand, dictation equipment, or handwritten copy.

25. **Typing Skills**

Typed work is neat, accurate, and indicates attention to details (this may include word processing skills).

Appendix D

Scenario 1
Cost Projections
Based on Longevity

ASSUMPTIONS

Scenario 1 has been prepared at the request of the Committee on State Employee Compensation. Cost projections contained herein are based on the current job hierarchy and pay grades. We do not recommend the Committee implement these adjustments. As mentioned throughout this Report, the basic building blocks of an acceptable compensation program are simply not present in the current Statewide Pay Plan. The cost projections are provided for discussion purposes only.

Current Job Evaluation System/Pay Grades:

The current job evaluation system and 25 pay grades have been used as a basis for making the cost projections in this Scenario.

Current Base Salary:

Current Base Salary includes the base monthly salary for full-time employees included in the Statewide Pay Plan, or Pay Plan 60. Salary information for employees paid by the Department of Administration was downloaded from the mainframe March 1990. Salary information for employees paid by the six universities was downloaded from their computers April 1990. Employees/jobs included in Pay Plans A or 00 have not been included in our projections.

ACTB Increase:

Across-the-board increases were first given to all employees based on their length of service (date of hire) with the State (not necessarily their entrance date into their current class). Different percentages were applied to each of the five groups of employees: 2%; 4%; 6%; 8%; and 10%.

Note, although percentages were applied to each employee based on their length of service as stated above, each employee was capped and could not exceed the maximum of their respective pay ranges. Three separate runs were made using the structures and maximums set at market, at a 10% lag, and at a 15% lag.

Employees to Min

After the ACTB increases were given, as explained in the previous paragraph, each employee who had not reached the minimum of their respective pay range was given an increase to bring them up to the minimum of the pay range. Three separate runs were made using the structures and minimums set at market, at a 10% lag, and at a 15% lag.

State of Montana

Scenario 1 Analysis – Based on Longevity

June 1990

Computations at Market

	Current Base Salary	First ACTB Increase	% Of Base	Second Employees To Min	% Of Base	Final Output In Salaries	Incr % Of Base	COMPA – Actual/Mdpt Before Increase	After Increase	Change
Group 1 (< 1 Yr)	$1,962,655	$39,088	1.99%	$193,261	9.85%	$2,195,004	11.84%	74.05%	82.82%	8.77%
Group 2 (>1 Yr & <= 2 Yrs)	$1,187,572	$47,447	4.00%	$52,734	4.44%	$1,287,753	8.44%	76.10%	82.52%	6.42%
Group 3 (>2 Yrs & <= 4 Yrs)	$1,703,036	$102,357	6.01%	$40,711	2.39%	$1,846,104	8.40%	76.27%	82.68%	6.41%
Group 4 (>4 Yrs & <= 6 Yrs)	$1,460,680	$116,365	7.97%	$11,024	0.75%	$1,588,069	8.72%	76.87%	83.57%	6.70%
Group 5 (> 6 Yrs)	$7,977,070	$795,468	9.97%	$4,090	0.05%	$8,776,628	10.02%	85.39%	93.94%	8.56%
Totals	$14,291,013	$1,100,725	7.70%	$301,820	2.11%	$15,693,558	9.81%	80.80%	88.73%	7.93%

Total Costs per Month $1,402,545

Total Costs per Year $16,830,540

State of Montana

Scenario 1 Analysis – Based on Longevity

June 1990

Computations at 10% Lag

	Current Base Salary	First ACTB Increase	% Of Base	Second Employees To Min	% Of Base	Final Output In Salaries	Incr % Of Base	COMPA – Actual/Mdpt Before Increase	After Increase	Change
Group 1 (< 1 Yr)	$1,962,655	$38,934	1.98%	$44,094	2.25%	$2,045,683	4.23%	82.20%	85.68%	3.48%
Group 2 (>1 Yr & <= 2 Yrs)	$1,187,572	$47,000	3.96%	$2,891	0.24%	$1,237,463	4.20%	84.47%	88.02%	3.55%
Group 3 (>2 Yrs & <= 4 Yrs)	$1,703,036	$101,971	5.99%	$1,614	0.09%	$1,806,621	6.08%	84.66%	89.81%	5.15%
Group 4 (>4 Yrs & <= 6 Yrs)	$1,460,680	$115,360	7.90%	$875	0.06%	$1,576,915	7.96%	85.31%	92.10%	6.79%
Group 5 (> 6 Yrs)	$7,977,070	$780,982	9.79%	$238	0.00%	$8,758,290	9.79%	94.76%	104.04%	9.28%
Totals	$14,291,013	$1,084,247	7.59%	$49,712	0.35%	$15,424,972	7.93%	89.68%	96.79%	7.12%

Total Costs per Month	$1,133,959
Total Costs per Year	$13,607,508

State of Montana

Scenario 1 Analysis – Based on Longevity

June 1990

	Current Base Salary	First ACTB Increase	% Of Base	Second Employees To Min	% Of Base	Final Output In Salaries	Incr % Of Base	COMPA – Actual/Mdpt Before Increase	After Increase	Change
Computations at 15% Lag										
Group 1 (< 1 Yr)	$1,962,655	$38,633	1.97%	$13,887	0.71%	$2,015,175	2.68%	87.16%	89.50%	2.33%
Group 2 (>1 Yr & <= 2 Yrs)	$1,187,572	$46,786	3.94%	$504	0.04%	$1,234,862	3.98%	89.57%	93.14%	3.57%
Group 3 (>2 Yrs & <= 4 Yrs)	$1,703,036	$101,439	5.96%	$327	0.02%	$1,804,802	5.98%	89.77%	95.13%	5.36%
Group 4 (>4 Yrs & <= 6 Yrs)	$1,460,680	$114,969	7.87%	$516	0.04%	$1,576,165	7.91%	90.45%	97.61%	7.15%
Group 5 (> 6 Yrs)	$7,977,070	$736,724	9.24%	$51	0.00%	$8,713,845	9.24%	100.48%	109.76%	9.28%
Totals	$14,291,013	$1,038,551	7.27%	$15,285	0.11%	$15,344,849	7.37%	95.09%	102.10%	7.01%

Total Costs per Month	$1,053,836
Total Costs per Year	$12,646,032

Scenario 1
Supplement to Cost Projections
Based on Longevity

ASSUMPTIONS

ACTB Increase

The first column "Increase Results Scenario 1" represents the actual results calculated in Scenario 1's projections. Note, although percentages were applied to each employee based on their length of service, each employee was capped and could not exceed the maximum of their respective pay ranges.

The second column "Flat Rate Increase" designates the amount of increase each employee would have received if a cap was not place on the maximum of their pay range.

The costs of giving ACTB increases were projected using pay structures and maximums created at market, at a 10% lag, and at a 15% lag.

Employees to Min

The first column "Before ACTB Increase" represents the cost of bringing employees within each group to the minimum of their respective pay range without giving consideration to the ACTB increase.

The second column "After ACTB Increase" represents the cost of bringing employees to the minimum of their pay range after they have first received the designated ACTB increase.

The costs of bringing employees to minimum were projected using pay structures and minimums created at market, at a 10% lag, and at a 15% lag.

Total Midpoints - New Structure

The total midpoints for employees within each group have been provided for structures created at market, at a 10% lag, and at a 15% lag.

State of Montana

Scenario 1 Analysis – Based on Longevity

June 1990

	ACTB Increase			Employees To Min			Total Midpoints New Structure
	Increase Results Scenario 1	Flat Rate Increase	Difference	Before ACTB Increase	After ACTB Increase	Difference	
Computations at Market							Midpoints At Market
Group 1	$39,088	$39,253	($165)	$228,541	$193,261	$35,280	$2,650,297
(< 1 Yr)	2.00%	2.00%					
Group 2	$47,447	$47,503	($56)	$97,403	$52,734	$44,669	$1,560,464
(>1 Yr & <= 2 Yrs)	4.00%	4.00%					
Group 3	$102,357	$102,182	$175	$132,107	$40,711	$91,396	$2,232,763
(>2 Yrs & <= 4 Yrs)	6.00%	6.00%					
Group 4	$116,365	$116,854	($489)	$98,986	$11,024	$87,962	$1,900,249
(>4 Yrs & <= 6 Yrs)	8.00%	8.00%					
Group 5	$795,468	$797,707	($2,239)	$94,377	$4,090	$90,287	$9,342,307
(> 6 Yrs)	10.00%	10.00%					
Totals	$1,100,725	$1,103,499	($2,774)	$651,414	$301,820	$349,594	$17,686,080

State of Montana

Scenario 1 Analysis – Based on Longevity

June 1990

	ACTB Increase			Employees To Min			Total Midpoints New Structure
	Increase Results Scenario 1	Flat Rate Increase	Difference	Before ACTB Increase	After ACTB Increase	Difference	
Computations at 10% Lag							Midpoints At 10% Lag
Group 1	$38,934	$39,253	($319)	$62,093	$44,094	$17,999	$2,387,535
(< 1 Yr)	2.00%	2.00%					
Group 2	$47,000	$47,503	($503)	$6,666	$2,891	$3,775	$1,405,869
(>1 Yr & <= 2 Yrs)	4.00%	4.00%					
Group 3	$101,971	$102,182	($211)	$5,422	$1,614	$3,808	$2,011,661
(>2 Yrs & <= 4 Yrs)	6.00%	6.00%					
Group 4	$115,360	$116,854	($1,494)	$3,334	$875	$2,459	$1,712,267
(>4 Yrs & <= 6 Yrs)	8.00%	8.00%					
Group 5	$780,982	$797,707	($16,725)	$2,634	$238	$2,396	$8,418,394
(> 6 Yrs)	10.00%	10.00%					
Totals	$1,084,247	$1,103,499	($19,252)	$80,149	$49,712	$30,437	$15,935,726

State of Montana

Scenario 1 Analysis – Based on Longevity

June 1990

	ACTB Increase			Employees To Min			Total Midpoints New Structure
	Increase Results Scenario 1	Flat Rate Increase	Difference	Before ACTB Increase	After ACTB Increase	Difference	
Computations at 15% Lag							Midpoints At 15% Lag
Group 1	$38,633	$39,253	($620)	$20,539	$13,887	$6,652	$2,251,672
(< 1 Yr)	2.00%	2.00%					
Group 2	$46,786	$47,503	($717)	$1,542	$504	$1,038	$1,325,847
(>1 Yr & <= 2 Yrs)	4.00%	4.00%					
Group 3	$101,439	$102,182	($743)	$1,517	$327	$1,190	$1,897,171
(>2 Yrs & <= 4 Yrs)	6.00%	6.00%					
Group 4	$114,969	$116,854	($1,885)	$1,088	$516	$572	$1,614,817
(>4 Yrs & <= 6 Yrs)	8.00%	8.00%					
Group 5	$736,724	$797,707	($60,983)	$444	$51	$393	$7,939,283
(> 6 Yrs)	10.00%	10.00%					
Totals	$1,038,551	$1,103,499	($64,948)	$25,130	$15,285	$9,845	$15,028,790

Appendix E

Scenario 2
Analysis of Survey Data
Supplement to Cost Projections
Based on Grade and Survey Statistics

The following charts provide an analysis of the 1990 survey results and the projected ACTB pay increases. The current 25 pay grades were divided into six groups based on the following criteria:

- COMPA-Ratios
  Actual Salaries/Survey Weighted Average
- Number of employees in pay grades.
- Number of benchmark jobs surveyed in each pay grade.

Pay increase percentages were determined by comparing the overall COMPA-Ratio for each group to the following:

- @ Market
  Comparison to a 100% COMPA-Ratio
- @ 10% Lag Policy
  Comparison to a 90% COMPA-Ratio
- @ 15% Lag Policy
  Comparison to a 85% COMPA-Ratio

Scenario 2
Cost Projections
Based on Grade and Survey Statistics

ASSUMPTIONS

Scenario 2 has been prepared at the request of the Committee on Sta: nployee Compensation. Cost projections contained herein are based on the cur: : job hierarchy and pay grades. We do not recommend the Committee imple:: it these adjustments. As mentioned throughout this Report, the basic building ' cks of an acceptable compensation program are simply not present in the current statewide Pay Plan. The cost projections are provided for discussion purposes only.

Current Job Evaluation System/Pay Grades:
The current job evaluation system and 25 pay grades have been used as a basis for making the cost projections in this Scenario.

Current Base Salary:
Current Base Salary includes the base monthly salary for full-time employees included in the Statewide Pay Plan, or Pay Plan 60. Salary information for employees paid by the Department of Administration was downloaded from the mainframe March 1990. Salary information for employees paid by the six universities was downloaded from their computers April 1990. Employees/jobs included in Pay Plans A or 00 have not been included in our projections.

ACTB Increase:
Across-the-board increases were first given to all employees based on Montana's January 1990 survey statistics. Different percentages were applied to each of the six groups depending on the COMPA ratio for that group of employees. Projections were made using structures built at market, at a 10% lag, and at a 15% lag.

Note, although percentages were applied to each employee based on survey statistics as stated above, each employee was capped and could not exceed the maximum of their respective pay ranges. Three separate runs were made using the structures and maximums set at market, at a 10% lag, and at a 15% lag.

Employees to Min
After the ACTB increases were given, as explained in the previous paragraph, each employee who had not reached the minimum of their respective pay range was given an increase to bring them up to the minimum of the pay range. Three separate runs were made using the structures and minimums set at market, at a 10% lag, and at a 15% lag.

Scenario 2
Supplement to Cost Projections
Based on Grade and Survey Statistics

ASSUMPTIONS

ACTB Increase

The first column "Increase Results Scenario 2" represents the actual results calculated in Scenario 2's projections. Note, although percentages were applied to each employee based on their length of service, each employee was capped and could not exceed the maximum of their respective pay ranges.

The second column "Flat Rate Increase" designates the amount of increase each employee would have received if a cap was not place on the maximum of their pay range.

The costs of giving ACTB increases were projected using pay structures and maximums created at market, at a 10% lag, and at a 15% lag.

Employees to Min

The first column "Before ACTB Increase" represents the cost of bringing employees within each group to the minimum of their respective pay range without giving consideration to the ACTB increase.

The second column "After ACTB Increase" represents the cost of bringing employees to the minimum of their pay range after they have first received the designated ACTB increase.

The costs of bringing employees to minimum were projected using pay structures and minimums created at market, at a 10% lag, and at a 15% lag.

Total Midpoints - New Structure

The total midpoints for employees within each group have been provided for structures created at market, at a 10% lag, and at a 15% lag.

State of Montana

Scenario 2 – Analysis of Survey Statistics

June 1990

Grade	No. Empl	No. Bnchm	Survey Results: Actual Avg	Survey Results: Svy Wtd Avg	COMPA Ratio: Actual Avg/ Svy Wtd Avg	ACTB Increases: @ Market COMPA–100%	ACTB Increases: @ 10% Lag COMPA–90%	ACTB Increases: @ 15% Lag COMPA–85%
Group 1						Increases to Midpoint – Group 1		
18–21	238	11	$3,392	$4,114	82.44%	17.3%	7.3%	3.3%
						Increases – Employees < Than Midpoint		
17	234	7	$2,769	$3,210	86.25%	19.3%	9.3%	5.3%
						Increases – Employees > Than Midpoint		
16	447	13	$2,530	$3,123	81.03%	15.3%	5.3%	2.0%
Totals	919	31	$8,691	$10,447	82.70%			
Group 2						Increases to Midpoint – Group 2		
15	643	18	$2,252	$2,891	77.91%	22.2%	12.2%	7.2%
						Increases – Employees < Than Midpoint		
14	989	19	$1,979	$2,549	77.66%	24.2%	14.2%	9.2%
						Increases – Employees > Than Midpoint		
Totals	1,632	37	$4,231	$5,440	77.79%	20.2%	10.2%	5.2%

Note: All employees in Scenario 2 will be subject to a minimum of a 2% ACTB increase.

State of Montana

Scenario 2 – Analysis of Survey Statistics

June 1990

Grade	No. Empl	No. Bnchm	Survey Results: Actual Avg	Survey Results: Svy Wtd Avg	COMPA Ratio: Actual Avg/ Svy Wtd Avg	ACTB Increases: @ Market COMPA–100%	ACTB Increases: @ 10% Lag COMPA–90%	ACTB Increases: @ 15% Lag COMPA–85%
Group 3						Increases to Midpoint – Group 3		
13	924	17	$1,787	$2,284	78.26%	20.6%	10.6%	5.6%
12	856	14	$1,712	$2,114	80.94%	Increases – Employees < Than Midpoint 22.6%	12.6%	7.6%
Totals	1,780	31	$3,499	$4,398	79.42%	Increases – Employees > Than Midpoint 18.6%	8.6%	3.6%
Group 4						Increases to Midpoint – Group 4		
11	715	12	$1,561	$1,909	81.77%	16.6%	6.6%	1.6%
10	676	10	$1,478	$1,729	85.63%	Increases – Employees < Than Midpoint 18.6%	8.6%	3.6%
Totals	1,391	22	$3,039	$3,638	83.43%	Increases – Employees > Than Midpoint 14.6%	4.6%	2.0%

Note: All employees in Scenario 2 will be subject to a minimum of a 2% ACTB increase.

State of Montana

Scenario 2 – Analysis of Survey Statistics

June 1990

Grade	No. Empl	No. Bnchm	Survey Results: Actual Avg	Survey Results: Svy Wtd Avg	COMPA Ratio: Actual Avg/ Svy Wtd Avg	ACTB Increases: @ Market COMPA–100%	ACTB Increases: @ 10% Lag COMPA–90%	ACTB Increases: @ 15% Lag COMPA–85%
Group 5						Increases to Midpoint – Group 5		
9	802	13	$1,337	$1,519	88.01%	17.2%	7.2%	2.2%
						Increases – Employees < Than Midpoint		
8	1240	14	$1,212	$1,553	78.06%	19.2%	9.2%	4.2%
						Increases – Employees > Than Midpoint		
Totals	2,042	27	$2,549	$3,072	82.80%	15.2%	5.2%	2.0%
Group 6						Increases to Midpoint – Group 6		
7	677	8	$1,194	$1,280	93.30%	9.7%	2.0%	2.0%
						Increases – Employees < Than Midpoint		
6	356	6	$1,246	$1,383	90.12%	11.7%	2.0%	2.0%
						Increases – Employees > Than Midpoint		
4–5	203	6	$951	$1,105	86.06%	7.7%	2.0%	2.0%
Totals	1,236	20	$3,391	$3,768	90.34%			

Note: All employees in Scenario 2 will be subject to a minimum of a 2% ACTB increase.

State of Montana

Scenario 2 Analysis – Based on Survey Statistics

June 1990

Computations at Market

	Current Base Salary	First ACTB Increase	% Of Base	Second Employees To Min	% Of Base	Final Output In Salaries	Incr % Of Base	COMPA – Actual/Mdpt Before Increase	After Increase	Change
Group 1 (Grades 16-25)	$1,787,793	$343,375 (19.3%/15.3%)	19.21%	$89	0.00%	$2,131,257	19.21%	82.01%	97.77%	15.76%
Group 2 (Grades 14-15)	$2,390,447	$577,339 (24.2%/20.2%)	24.15%	$0	0.00%	$2,967,786	24.15%	81.21%	100.83%	19.61%
Group 3 (Grades 12-13)	$2,666,185	$601,520 (22.6%/18.6%)	22.56%	$1,537	0.06%	$3,269,242	22.62%	79.47%	97.45%	17.98%
Group 4 (Grades 10-11)	$2,098,977	$387,427 (18.6%/14.6%)	18.46%	$4,143	0.20%	$2,490,547	18.66%	81.40%	96.58%	15.18%
Group 5 (Grades 8-9)	$2,989,476	$571,680 (19.2%/15.2%)	19.12%	$3,317	0.11%	$3,564,473	19.23%	80.97%	96.54%	15.57%
Group 6 (Grades 1-7)	$2,232,357	$257,845 (11.7%/7.7%)	11.55%	$27,368	1.23%	$2,517,570	12.78%	79.48%	89.63%	10.15%
Totals	$14,165,235	$2,739,186	19.34%	$36,454	0.26%	$16,940,875	19.59%	80.68%	96.49%	15.81%

Total Costs per Month	$2,775,640
Total Costs per Year	$33,307,680

State of Montana

Scenario 2 Analysis – Based on Survey Statistics

June 1990

Computations at 10% Lag

	Current Base Salary	First ACTB Increase	% Of Base	Second Employees To Min	% Of Base	Final Output In Salaries	Incr % Of Base	COMPA – Actual/Mdpt Before Increase	After Increase	Change
Group 1 (Grades 16-25)	$1,787,793	$154,962 (9.3%/5.3%)	8.67%	$0	0.00%	$1,942,755	8.67%	91.03%	98.92%	7.89%
Group 2 (Grades 14-15)	$2,390,447	$320,250 (14.2%/10.2%)	13.40%	$312	0.01%	$2,711,009	13.41%	90.11%	102.19%	12.08%
Group 3 (Grades 12-13)	$2,666,185	$323,606 (12.6%/8.6%)	12.14%	$971	0.04%	$2,990,762	12.17%	88.15%	98.88%	10.73%
Group 4 (Grades 10-11)	$2,098,977	$162,917 (8.6%/4.6%)	7.76%	$3,178	0.15%	$2,265,072	7.91%	90.32%	97.47%	7.15%
Group 5 (Grades 8-9)	$2,989,476	$256,587 (9.2%/5.2%)	8.58%	$2,355	0.08%	$3,248,418	8.66%	89.89%	97.68%	7.79%
Group 6 (Grades 1-7)	$2,232,357	$44,608 (2%/2%)	2.00%	$18,022	0.81%	$2,294,987	2.81%	88.26%	90.74%	2.48%
Totals	$14,165,235	$1,262,930	8.92%	$24,838	0.18%	$15,453,003	9.09%	89.54%	97.68%	8.14%

Total Costs per Month	$1,287,768
Total Costs per Year	$15,453,216

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Scenario 2 Analysis – Based on Survey Statistics

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Computations at 15% Lag

	Current Base Salary	First ACTB Increase	% Of Base	Second Employees To Min	% Of Base	Final Output In Salaries	Incr % Of Base	COMPA – Actual/Mdpt Before Increase	After Increase	Change
Group 1 (Grades 16-25)	$1,787,793	$68,978 (5.3%/2%)	3.86%	$0	0.00%	$1,856,771	3.86%	96.52%	100.24%	3.72%
Group 2 (Grades 14-15)	$2,390,447	$181,980 (9.2%/5.2%)	7.61%	$238	0.01%	$2,572,665	7.62%	95.55%	102.83%	7.28%
Group 3 (Grades 12-13)	$2,666,185	$171,810 (7.6%/3.6%)	6.44%	$643	0.02%	$2,838,638	6.47%	93.49%	99.54%	6.05%
Group 4 (Grades 10-11)	$2,098,977	$64,303 (4%/2%)	3.06%	$2,607	0.12%	$2,165,887	3.19%	95.76%	98.81%	3.05%
Group 5 (Grades 8-9)	$2,989,476	$105,946 (4.2%/2%)	3.54%	$1,805	0.06%	$3,097,227	3.60%	95.31%	98.75%	3.44%
Group 6 (Grades 1-7)	$2,232,357	$42,951 (2%/2%)	1.92%	$7,326	0.33%	$2,282,634	2.25%	93.59%	95.69%	2.11%
Totals	$14,165,235	$635,968	4.49%	$12,619	0.09%	$14,813,822	4.58%	94.94%	99.29%	4.35%

Total Costs per Month	$648,587
Total Costs per Year	$7,783,044

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Scenario 2 Analysis – Based on Survey Statistics

June 1990

	ACTB Increase			Employees To Min			Total Midpoints New Structure
	Increase Results Scenario 2	Flat Rate Increase	Difference	Before ACTB Increase	After ACTB Increase	Difference	
Computations at Market							Midpoints At Market
Group 1	$343,375	$309,288	$34,087	$49,304	$89	$49,215	$2,179,907
(Grades 16-25)	(19.3%/15.3%)	17.30%					
Group 2	$577,339	$530,679	$46,660	$8,473	$0	$8,473	$2,943,385
(Grades 14-15)	(24.2%/20.2%)	22.20%					
Group 3	$601,520	$549,234	$52,286	$140,211	$1,537	$138,674	$3,354,880
(Grades 12-13)	(22.6%/18.6%)	20.60%					
Group 4	$387,427	$348,430	$38,997	$89,049	$4,143	$84,906	$2,578,742
(Grades 10-11)	(18.6%/14.6%)	16.60%					
Group 5	$571,680	$514,190	$57,490	$135,305	$3,317	$131,988	3692092
(Grades 8-9)	(19.2%/15.2%)	17.20%					
Group 6	$257,845	$216,539	$41,306	$143,163	$27,368	$115,795	$2,808,834
(Grades 1-7)	(11.7%/7.7%)	9.70%					
Totals	$2,739,186	$2,468,361	$270,826	$565,505	$36,454	$529,051	$17,557,840

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Scenario 2 Analysis – Based on Survey Statistics

June 1990

	ACTB Increase			Employees To Min			Total Midpoints New Structure
	Increase Results Scenario 2	Flat Rate Increase	Difference	Before ACTB Increase	After ACTB Increase	Difference	
Computations at 10% Lag							Midpoints At 10% Lag
Group 1	$154,962	$130,509	$24,453	$3,194	$0	$3,194	$1,963,898
(Grades 16-25)	(9.3%/5.3%)	7.30%					
Group 2	$320,250	$291,635	$28,615	$2,011	$312	$1,699	$2,652,905
(Grades 14-15)	(14.2%/10.2%)	12.20%					
Group 3	$323,606	$282,616	$40,990	$15,919	$971	$14,948	$3,024,548
(Grades 12-13)	(12.6%/8.6%)	10.60%					
Group 4	$162,917	$138,532	$24,385	$10,875	$3,178	$7,697	$2,323,944
(Grades 10-11)	(8.6%/4.6%)	6.60%					
Group 5	$256,587	$215,242	$41,345	$12,873	$2,355	$10,518	$3,325,647
(Grades 8-9)	(9.2%/5.2%)	7.20%					
Group 6	$44,608	$44,647	($39)	$27,834	$18,022	$9,812	$2,529,228
(Grades 1-7)	(2%/2%)	2.00%					
Totals	$1,262,930	$1,103,181	$159,749	$72,706	$24,838	$47,868	$15,820,170

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Scenario 2 Analysis – Based on Survey Statistics

June 1990

	ACTB Increase			Employees To Min			Total Midpoints New Structure
	Increase Results Scenario 2	Flat Rate Increase	Difference	Before ACTB Increase	After ACTB Increase	Difference	
Computations at 15% Lag							Midpoints At 15% Lag
Group 1	$68,978	$58,997	$9,981	$539	$0	$539	$1,852,342
(Grades 16-25)	(5.3%/1.3%)	3.30%					
Group 2	$181,980	$172,112	$9,868	$1,542	$238	$1,304	$2,501,751
(Grades 14-15)	(9.2%/5.2%)	7.26%					
Group 3	$171,810	$149,306	$22,504	$4,372	$643	$3,729	$2,851,800
(Grades 12-13)	(7.6%/3.6%)	5.76%					
Group 4	$64,303	$33,584	$30,719	$3,896	$2,606	$1,290	$2,192,008
(Grades 10-11)	(8.6%/4.6%)	1.79%					
Group 5	$105,946	$65,768	$40,178	$3,290	$1,806	$1,484	$3,136,547
(Grades 8-9)	(4.2%/.2%)	2.31%					
Group 6	$42,951	$44,647	($1,696)	$10,165	$7,326	$2,839	$2,385,353
(Grades 1-7)	(2%/2%)	2.00%					
Totals	$635,968	$524,415	$111,553	$23,804	$12,619	$11,185	$14,919,801